

Appendix A: **Supplemental Information and Guidance for Outdoor and Indoor Air Quality Programs Funded with FY 2008 STAG Funds**

Organization

This grant appendix is divided into six major sections: an executive summary that highlights significant changes and developments, an overview of key administrative and programmatic requirements, discussions of specific air program areas, a preliminary national allocation of grants for state and local air pollution control agencies, and an overview and preliminary allocation of indoor radon grants.

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Section I. EXECUTIVE SUMMARY

Introduction

The technical portion of the program guidance identifies the air and radiation priorities, programs, activities and milestones necessary to achieve the performance goals in the Agency's FY 2008 Annual Performance Plan and Congressional Justification and to make progress towards the Clean Air goal in the Agency's multi-year Strategic Plan. State, local and Tribal agencies (and key multi-state organizations), as co-implementors, are essential to that effort. Their roles and responsibilities, supported by EPA grant assistance, are also described in the State/ Local Air Quality Management, the Tribal Air Quality Management, and the Radon components of the technical program guidance. Related measures of performance are contained in the appendices covering the annual program commitments and the related subset of grant performance measures.

This appendix complements the technical guidance and provides additional information and guidance for selected program areas supported by grants to these agencies and organizations. The appendix highlights the major programmatic and administrative considerations impacting program grants in FY 2008 and includes a preliminary distribution¹ of state/local air grants. There are several significant developments for grants in FY 2008 including changes in funding level, purpose and authority; the continued restructuring of air monitoring programs; treatment of multi-jurisdictional organizations; refinements in performance measures and accountability; and continued implementation of other key programmatic and administrative provisions.

The focus of this appendix is primarily on state and local program grants. While the guidance does discuss important provisions applicable to *all* air and radiation grants it does not address specific OAR *project or discretionary* grants that may be available during FY 2008. More detailed guidance for these types of grants is provided in their respective solicitations or applicable information documents.² Please also note that additional, separate guidance pertaining to Tribal and Indoor Radon grants may also be available.³ Agencies should contact their EPA program contact for more information.

FY 2008 Funding

The FY 2008 budget request includes approximately \$239.2 million in the State and Tribal Assistance Grant (STAG) appropriation (Table A-1). A total of \$184.2 million is targeted for the support of continuing state and local air programs, \$10.9 million for tribal air grants, \$1 million for regional haze planning organizations, approximately \$8.1 for state and tribal indoor radon programs and \$35 million for an expanded diesel emission reduction program that would incorporate the existing Clean School Bus program. A discussion of the proposed funding

1 The allocation is preliminary at this point since: (a) revisions may be necessary based upon a final FY 2008 appropriation and enacted budget, (b) the Agency's FY 2007 appropriation was not yet final and will affect implementation of key programs such as PM_{2.5} monitoring, and (c) the amount of funds devoted to associated program support is subject to revision based on updated information from affected state/local agencies.

2 More information on OAR and other Agency discretionary grant opportunities, as they become available, can be found at: http://epa.gov/air/grants_funding.html and http://www.epa.gov/ogd/grants/funding_opportunities.htm.

3 Additional administrative guidance for the State Indoor Radon program may be found at: <http://www.epa.gov/radon/sirgprogram.html>. Additional information for Tribal air programs can be found at: <http://www.epa.gov/oar/tribal/pdfs/menuofoptions.pdf>.

approach for this program can be found in Section III of this appendix. The amount for continuing air programs reflects a reduced level for funds in the areas of CO, SO₂, NO₂ and lead where significant air quality gains have been achieved. Adequate funds have been retained to address remaining lead non-attainment issues. Funds to support PM_{2.5} ambient monitoring and air toxics monitoring have been added to the continuing program amount (see below). The FY 2008 request includes a level of \$1 million for regional haze planning organizations reflecting the shift in responsibility for implementation of haze and visibility requirements to the affected state and local air pollution control agencies. The difference in funding levels for RPOs from the President's FY 2007 request vs. the FY 2008 request (\$1.5M) has been redistributed to the Regions on a pro-rata basis. OAR is seeking comment on this redistribution.

Table A-1 STAG Assistance: FY 2006 Enacted , FY 2007 Request* vs. FY 2008 (in \$Ms)			
Program	FY 2006 Enacted	FY 2007 Request	FY 2008 Request
Continuing Air Program **	\$173.5	\$182.7	\$184.2
PM 2.5 Air Monitoring (§103)	\$41.9		
Regional Haze Planning (§103)	\$4.9	\$2.5	\$1.0
Clean School Bus USA	\$6.9		
Diesel Emission Reduction Program (Energy Policy Act)		\$49.5	\$35.0
Tribal Air Program	\$10.9	\$10.9	\$10.9
State Indoor Radon	\$8.0	\$8.1	\$8.1
Total	\$246.1	\$253.7	\$239.2
<p>* The FY 2007 operating plan was not yet final when this draft guidance was released.</p> <p>** Includes continuing §105, air toxics monitoring, §106 OTC. In FY 2007 request, and FY 2008, also includes PM_{2.5} monitoring.</p>			

Grant Purposes and Authorities

The President's budget request recognizes the maturation of the PM_{2.5} air monitoring program and its support for implementation of the PM_{2.5} NAAQS as part of a continuing air program. Accordingly FY 2008 STAG funds for PM_{2.5} monitoring would be administered as part of the Clean Air Act Section 105 program. Section 105 requires a minimum 2/5 (40%) recipient cost share. EPA first proposed the transition from §103 (100% federal funding) to §105 in FY 2007. The transition in funding authority combined with a reduction in the overall level of air STAG funds means that some state and local agencies may be required to assume an increased share of the costs of their air program. EPA will work with states, local and tribal recipients to facilitate this transition in FY 2008. EPA is seeking comment from state, local and tribal agencies on how to best implement this transition.

Continued Restructuring of Ambient Monitoring

EPA is also seeking comment on the continued restructuring of, and support for, the ambient air monitoring programs nationally. Recent revisions to the national ambient air quality standard for particulate matter have also been accompanied by significant revisions to the Agency's ambient air monitoring regulations. This guidance discusses various investments and disinvestments within the PM_{2.5} program and other in NAAQS areas and air toxics to achieve this and other air monitoring objectives.

The level and distribution of FY 2007 funds for PM_{2.5} monitoring was uncertain at the time of release of this draft guidance due to an extended FY 2007 continuing resolution and the need to consider all the implications of recent changes in the air monitoring regulations and the 24 hour PM_{2.5} NAAQS. Since FY 2007 PM_{2.5} funding will impact the distribution of FY 2008 monitoring funds, a preliminary allocation of grants for monitoring purposes directly awarded to state and local agencies for 2008, normally included for comment, has not been provided in the draft guidance at this time. EPA has included a summary of the in-kind assistance anticipated for 2008 based on a stable operating network as operated using FY 2006 and FY 2007 funds. EPA will develop a preliminary allocation of PM_{2.5} monitoring direct award funds available at each EPA Regional Office level once the Agency works through a final allocation for 2007. EPA will make this preliminary 2008 allocation available for comment by State and local agencies in advance of a final allocation.

Funding Co-Regulator Organizations

For numerous years OAR and the EPA Regions have provided direct grants to specific co-regulator organizations at the direction of their member state/local air pollution control agencies using STAG funds. A co-regulator organization is defined by EPA as a national or regional (i.e., multi-jurisdictional) organization that represents the interests of co-regulators or co-implementors (state, tribal or local governments) in the execution of national or regional environmental programs.⁴ In OAR's case the only co-regulator grant awarded at the national level has been to the National Association of Clean Air Agencies (formerly STAPPA-ALAPCO). In various regions of the country state and local agencies have formed multi-jurisdictional organizations (MJO) to help coordinate their geographically-specific air quality interests. These agencies have directed their Regional Offices to target portion of their grant allotment to their MJO.

Over the past year EPA has received numerous inquiries from States and members of Congress about how the Agency funds co-regulator organizations using STAG funds. In order to assure that State preferences are being followed the Agency must now ensure that the head of the affected State environmental agency or department is involved in the co-regulator funding process and provides prior concurrence before any of the State's STAG funds can be taken off-the-top to fund a co-regulator organization via a direct grant.

The Agency has also been questioned as to whether co-regulator status is an appropriate exception from grant competition consistent with the Agency's Competition Policy. Effective October 1, 2007, the Agency is proposing to eliminate co-regulator status as an exception to having to compete for a grant. However, other exceptions under the Policy - including the 'public interest' exception - remain available to a co-regulator organization. OAR will provide additional information for Regions and recipients before the FY 2008 guidance is finalized.

⁴ The definition of co-regulator/co-implementor may be found in the Agency's Order (5700.5A1) - Revised Competition Policy. http://intranet.epa.gov/ogd/policy/order/5700_5.pdf.

Refinements in Performance Measures and Accountability

OAR will continue to implement its program to improve short term and long term measures of grant program performance. This includes assurance that all grants identify and demonstrate environmental and/or programmatic results or demonstrate how their results can contribute to an environmental result; compilation and reporting of information on NAAQS grant-related performance measures from the FY 2007 PART Review; and implementation of the state grant performance template requirements. Additional guidance on programmatic and environmental results from grants may be found at:

http://www.epa.gov/ocfo/npmguidance/fy05_07guidance.htm and
http://www.epa.gov/ocfo/npmguidance/oar/2007/oar_2007_enviro_n_results.pdf.

Beginning in FY 2007 OMB directed that the Agency provide a template for use by States in preparing and submitting their grant work plans for categorical grants and Performance Partnership Grants (PPGs) starting in FY 2007. The template requires that states provide a clearer linkage of their grant-funded efforts to EPA's strategic long and short-term goals and highlight the relevant aspects of their annual performance and results. Increased reporting by recipients was not required. Late in FY 2007 and into FY 2008 OAR expects to finalize national baseline information on these performance measures and to consult with states and other recipients on next steps. The template is discussed in more detail in the following Section II.

OAR and the Regional Offices have also completed an assessment of grant and other reporting requirements for recipients and have identified areas for reduction, refinement or reaffirmation. OAR expects this to be a continuous process and seeks comment from state, local and tribal agencies on ways to improve performance reporting and performance measures. OAR is also interested in discussing and is seeking comment on the use of improved short-term environmental performance measures and indicators and their incorporation in annual grant agreements.

Section II. EFFECTIVE GRANTS MANAGEMENT and RESULTS

State Grant Template and Performance Measures

As part of the FY 2007 budget process OMB was critical of the Agency's ability to determine how its state grant programs were delivering results consistent with the Agency's strategic plan. Beginning in FY 2007, OMB directed the Agency to develop a template that states would have to follow in preparing and submitting their work plans for single media categorical and Performance Partnership grant awards. The template must: (a) include clear linkages to EPA's Strategic Plan and long and short-term goals; (b) have requirements for consistent and regular performance reporting; (c) allow for meaningful comparisons between various States' past and planned activities and performance; and (d) include language and mechanisms assuring state accountability in meeting performance goals.

In response to the template directive, EPA's objective was to avoid increasing unnecessary recipient reporting while identifying a limited number of improved grant measures that focused on environmental and/or programmatic outcomes. For FY 2007, and also for FY 2008, the measures in the template are a subset of the larger suite of OAR commitments and

measures appearing in the Agency's Annual Commitment System (ACS) and either reflect information already being reported by recipients through their work plans or information that is readily available and that can be combined to form a new metric (i.e., NAAQS grant PART measures). The measures also reflect a response to OMB's specific reviews of several OAR's major grant programs. A separate appendix of the national guidance document provides a complete listing of the FY 2008 annual commitments and grant performance measures.⁵ OMB's more detailed findings may be found at: <http://www.whitehouse.gov/omb/expectmore> . A more complete discussion of these measures and the methodologies behind them can be found at: http://www.epa.gov/ocfo/npmguidance/oar/2007/oar_2007_grant_template.pdf , http://www.epa.gov/ocfo/npmguidance/oar/2007/oar_2007_additional_guidance.pdf , and http://www.epa.gov/ocfo/npmguidance/oar/2007/oar_2007_q_and_a.pdf . EPA is seeking comment on implementation of the grant performance measures. Additional information on their implementation in FY 2008 will be included in the final FY 2008 national guidance.

Achieving Programmatic and Environmental Results

The OMB template recognizes the importance of assuring that intended results are achieved in the effective utilization of public funds. It is consistent with prior actions taken by EPA to bolster the effective management of grants and ensure results, specifically EPA's Order 5700.7 – Environmental Results in Grants effective in January 2005. Order 5700.7 applies to *all Agency grants* not just grants to States – and it covers all phases of the grants process from solicitation to application to reporting to evaluation. The Order requires EPA project officers to assure that each grant: (a) can be linked to the Agency's strategic architecture, (b) articulates measurable outputs and outcomes, and (c) reports the programmatic and, where possible, environmental results achieved. OAR's national guidance outlines selected programmatic and environmental results expected from state, tribal, and local programs funded by Federal grants and will also include any applicable PART measures. Regional offices should use the national guidance in the negotiation of project, categorical and performance partnership grant agreements with grantees. For competitive grants, the Agency's announcement or solicitation will also articulate the linkage to the Agency's architecture and the expected accomplishments.

The Order also reinforces the accountability requirements contained in current grant regulations. Approved agreements should meet the requirements of 40 CFR 30, 31 and 40 CFR 35, as appropriate. Pursuant to 40 CFR 35.107, both §105 grants and Performance Partnership grant agreements that include §105 grants should include milestones, deliverables, and expected outcomes or accomplishments. These requirements are consistent with EPA's Order 5700.7. Performance objectives and measures related to the grant-funded activities discussed specifically in this guidance are included within the respective sections of the narrative and Appendix B on commitments and performance measures (including PART measures related to grants). Additional information on environmental results and grants and other grant administrative requirements intended to assist EPA project officers and recipients in improving overall grant management is discussed below and in more detail in Section VII of the appendix. The Results

⁵ The ACS includes commitments and measures that EPA feels are essential for program management and performance assessment. Responsibilities are included for both EPA (HQ and Regions) and State/Local/Tribal grant recipients. All ACS information applicable to grant recipients is still required for coverage in grant work plans. The template doesn't diminish these; it simply highlights a subset of this information by focusing on those aspects that express short-term environmental results.

Order may be found at: <http://www.epa.gov/ogd/grants/award/5700.7.pdf> . For more information on the template and the results order please contact William Houck @202-564-1349.

Promoting Competition

EPA's policy is to promote competition in the award of grants and cooperative agreements, and to ensure that the competitive process is fair and open, with no applicant receiving an unfair advantage. EPA Order 5700.5, effective September 30, 2002, includes the requirements for implementing this policy. In drafting the order, EPA recognized that it is not practical to compete certain grants and cooperative agreements. The competition order exempts grants for continuing environmental programs, such as those funded under section 105. The order also exempts: grants for fine particulate monitoring that have been awarded under §103 , national air toxics monitoring trends network grants that have been awarded under §103, regional haze planning organization grants, and federally-recognized tribes and inter-tribal consortia under OAR's tribal grant program; TSCA section 306 grants for state indoor radon programs; and TSCA section 10 grants for tribal radon programs. The order does not preclude EPA from allocating grant funds for a portion of these programs through competition, if the Agency determines it is in the best interest of the public. The order may be found at: <http://www.epa.gov/ogd/grants/competition.htm>. For more information on competition in air assistance programs, contact Katherine Moore at 202-564-1356.

Using Proper Authorities for Award

Following the restructuring of the Agency's appropriations structure numerous years ago, OAR issued guidance for use by Program and Regional Offices clarifying what entities were eligible for grant assistance given the purpose, appropriation and grant authority appropriate to the funds (see "Guidance for Funding Air and Radiation Activities Using the STAG Appropriation (11/12/99; OAR)." Currently a joint Regional-OAR workgroup is updating this guidance to reflect changes in appropriations, authorities and programs affecting the Agency. An updated version of the document is expected in early CY 2007.

For the most part EPA funds state, tribal, and local continuing air programs using the authority of Section 105 of the Clean Air Act and funds the Ozone Transport Commission (OTC) using Section 106 of the Act. EPA also awards radon assistance grants under sections 10 and 306 of the Toxic Substances Control Act (TSCA). CAA Section 103 authority enables the Agency to provide grants to a range of entities for research, investigations, experiments, demonstrations, surveys and studies relating to the causes and effects (including health and welfare), extent, prevention and control of air pollution. The source of the appropriation and Agency policy, however, further dictate how this authority is used.

For example, §103 authority continues to be authorized and used for Tribal capacity building, regional haze planning and certain other activities carried out by multi-jurisdictional organizations that are comprised of state, local and tribal representatives. Starting in FY 2008, however, the President did not request §103 authority for PM_{2.5} monitoring activities. This may raise questions about: (a) how the §103 dollars not obligated in FY 2007 will carry over into FY 2008, and (b) how prior year dollars de-obligated in FY 2008 will be managed. The answer is that the original authority and purpose attributed to these funds when they were *first*

appropriated remains the authority and purpose to be followed in their award and administration until they are *expended*.

However, EPA's intent is that all these FY 2007 and prior year funds will be expended before new grants using §105 authority (which will now require a cost share) are initiated. This is to ensure that the Agency does not run afoul of 31 U.S.C. §1301(a) (i.e., appropriations shall be applied only to the objects for which the appropriations were made except as otherwise provided by law). Regions should ensure that no specific state/local activity at any given time and place is supported in both a §103 and a §105 grant. For example, the §105 grant awarded with FY 2008 funds should have a start date for PM_{2.5} monitoring at a given station that coordinates with the end date of the same monitoring under the older Section 103 grant, even if a different start date applies to other activities under the Section 105 grant. To aid transparency, the approach used to avoid overlaps should be as simple as possible. One approach would be to have one end/start transition date for all monitoring stations in a given state.

As EPA and its partners make this transition, OAR will need to be mindful of its grants management responsibilities and will need to work closely with the Regional Offices and with State, Local and Tribal agencies to:

- communicate the proposed changes in grant authority to recipients;
- ensure that funding on current grants is being drawn down appropriately;
- obligate prior year and current funding as appropriate;
- return unused Section 103 funds to headquarters; and
- transition to the Section 105 authority after Congress appropriates FY 2008 funding with this change and the current PM_{2.5} grants expire.

Additional information and guidance will be provided either in the final FY 2008 program guidance or supplemental guidance issued by OAR.

Ensuring Effective Oversight of Assistance Agreements

EPA issued Order 5700.6, effective January 8, 2003, to streamline post-award management of grants and cooperative agreements and to help ensure effective oversight of recipient performance and management. The order encompasses both the administrative and programmatic aspects of the Agency's financial assistance programs. It requires each EPA office providing assistance to develop and carry out a post-award monitoring plan, and conduct basic monitoring for every award.

From the programmatic standpoint, this monitoring should ensure satisfaction of five core areas: (1) compliance with all programmatic terms and conditions, (2) correlation of the recipient's work plan and application to actual progress under the award, (3) availability of funds to complete the project, (4) proper management of, and accounting for, equipment purchased under the award, and (5) compliance with all statutory and regulatory requirements of the program. Offices must conduct advanced monitoring on a certain portion of grant awards each

year and carry out more extensive contact with, and review of, recipient performance. Both levels of oversight must be documented in the official grant file. EPA Regions may find more information on the order at: <http://epawww.epa.gov/oinijhkh/order/5700.6.pdf>.

Additional Guidance and Tools

Additional information and guidance on grant administration and management for project officers and recipients will be provided to EPA project officers in the final version of the annual program and grant guidance which is targeted for release in late April.

Section III. ADDITIONAL INFORMATION on SPECIFIC AIR PROGRAM AREAS

Diesel Emission Reduction Program

Program Purpose: The budget request for FY 2008 includes \$35.0 million to support the Diesel Emission Reduction provisions of the Energy Policy Act (EPA) of 2005. This includes funding for competitive federal grants to reduce diesel emissions from the existing fleet as well as funding to support the Agency's Clean School Bus USA program. Sections 791-797 of the Energy Policy Act (EPA) authorize these grant funds which will support implementation of the National Clean Diesel Campaign. Through this program, OAR will focus on reducing particulate matter (PM) by up to 95 percent from existing diesel engines, including both on-highway and non-road equipment. Existing diesel engines are not subject to the new, more stringent emission standards that take effect in 2007 and later. These engines often remain in service for 20 or more years, and this program will help provide immediate reductions by retrofitting these engines with emission control technologies sooner than would otherwise occur through normal turnover of the fleet. Implementation of the program also will produce both criteria air pollutant, and air toxics, benefits.

This program will support diesel engine retrofits, rebuilds, replacements, and idling reduction measures. Five sectors are targeted for emission reductions from the existing fleet: freight, construction, school buses, agriculture, and ports. Up to 30 percent of the funds for diesel emissions reduction grants *may* be appropriated to provide formula grants to states to establish and support state clean diesel grant or loan programs. At this time it is unclear if funds will be appropriated for this provision or just for the National Diesel Emission Reduction (DER) program.

Program Design: OTAQ expects to fund at least 200 new grants deploying technology in various sectors using diesel engines. Funds will also be used to continue support to the well-established Clean School Bus USA program. Specifically, a portion of these funds will be used to award competitive grants for replacing older buses, repowering and retrofitting them with emission control technology, such as diesel particulate filters (DPFs). Other strategies include idling reduction programs, which lower engine idling time and reduce harmful emissions.

The Agency's strategy to implement this program and disseminate its associated clean diesel funding is dependent on the actual appropriation levels and any accompanying language regarding implementation. In addition, the timing of the actual appropriation will dictate when

EPA will publish its national announcement of funding availability. As authorized by the Diesel Emissions Reduction portion of the Energy Act:

- At least 70% of the funding is dedicated to provide grants and low-cost revolving loans to support the National Clean Diesel Initiative charged with achieving significant reductions in diesel emissions. This will include the Clean School Bus USA program. Note that 50% of these funds are directed to benefit public fleets.
- If the state program provision is funded, no more than 30% of the total funding will be distributed directly to state programs which are designed to achieve significant reductions in diesel emissions. The Agency intends to provide guidance to states for applying for these funds if this provision is funded. This would include information on the cost-effectiveness of various emission reduction technologies, and permissible uses of the grant funds as directed by the EPCA's Diesel Emissions Reduction provisions.
- In regard to the first 70% of the funding, the Agency will request proposals from eligible entities for projects that will reduce emissions from the existing fleet of diesel engines. EPA will give priority to projects that:
 - o maximize public health benefits,
 - o are in areas with poor air quality and/or with air toxic concerns,
 - o pursue the most cost effective strategies,
 - including certified engine configurations, verified technologies, emerging technologies, early use of ULSD,
 - promoting alternative fuels where appropriate,
 - o serve highest population centers,
 - o serve communities with environmental justice concerns,
 - those that receive disproportionate air pollution from diesel fleets.
- EPA will publish Requests for Applications (RFAs) and notify Congress, states, and other interested or eligible entities, of both this funding competition and of the direct state allocations through their respective associations (e.g., NACAA, AAPA, EMA, DTF), announcements on EPA's website, announcements on EPA's ten regional websites, press advisories, and other means.
- The RFA will provide a 90-day window for eligible entities to apply to EPA for this funding assistance. Once that 90-day window expires and within the subsequent 120-day period, EPA will:
 - o Review every proposal received to ensure each one meets the required criteria set forth in the RFA.
 - o Disregard proposals that do not meet the criteria.
 - o Rank each remaining proposal on its merits according to the criteria set forth in the RFA (see "priorities" above.)
 - o Notify Congress of the grantee selections
 - o Award the highest ranked proposals

For more information, please contact Jim Blubaugh in the Office of Transportation and Air Quality at 202-343-9244.

National Geographic Priorities

U.S.-Mexico Border Air Program

The proximity of states and localities in EPA's Regions 6 and 9 to the border presents a number of trans-boundary air quality challenges. Many border area residents, especially those in heavily urbanized areas, are exposed to health-threatening levels of air pollutants including ozone, PM, CO, SO₂, and air toxics. Visibility impairment exists in most of the Class I areas along and near the border. Accurate evaluation of air quality in the border will allow both countries to successfully target controls and reduce air pollutants. Capacity-building via such evaluation, training, and pilot projects that can be expanded by Mexico will further reduce air emissions along the border.

The *Border 2012: U.S. Mexico Environmental Program* agreement, signed by both countries on April 3, 2003, was created to promote regional as well as border-wide strategies to improve air quality through coordinated air quality planning and management activities, such as the development of emissions inventories; the deployment, operation, and maintenance of air monitoring networks; the development of alternative fuels and energy sources; the development of innovative and progressive air quality management approaches; the design of air quality plans for the reduction and control of air pollution; pilot emissions reductions projects; and training and workshops aimed at building capacity, and the development of public awareness and participation.

Milestones for demonstrating progress towards clean air in the border region are outlined by the *Border 2012 Program* and in EPA's long and short term strategic goals and objectives. Grant assistance plays a key role in helping achieve them. Early efforts focused on developing an organizational infrastructure, raising awareness, gathering information and establishing baseline information. Recent assistance has increasingly been focusing on critical analysis and mitigation measures aimed at attaining clean air goals and building capacity for Mexico to take over management of these and similar programs.

In addition to supporting the efforts of affected state, local and multi-jurisdictional agencies, the *Border 2012 Program* uses regional workgroups, task forces, and policy forums to develop and implement air pollution emission reduction strategies. Many of these rely heavily on grass-roots input and actions. For example, OAR and its Mexican counterpart lead the Border 2012 Air Policy Forum, established to employ a bottom up collaborative approach to develop strategies for cooperative emissions reduction efforts along the border. EPA's activities are designed to encourage, develop and implement cooperative projects with various levels of federal, state and local government, tribes, academics, NGOs and others, so that sustained, comprehensive pollution abatement can occur in the common air sheds of border sister cities, as well as in remote areas where trans-border air pollution occurs. Air Policy Forum members additionally advise EPA and Mexico's SEMARNAT on potential strategic funding needs and opportunities.

EPA Regions 6 and 9 use a combination of direct grants and competitive solicitations to support State, Local, and Tribal initiatives. In encouraging local and grass-roots strategies, the Agency is committed to full and open competition for many grants and contracts. This empowers a larger number of state, local, tribal entities (also working with academics and NGOs) to become active participants in border air quality improvements. The combination of these STAG funds with directed, specific projects facilitated by contracts has yielded very positive results. In FY 2008 over \$2.6 million split evenly between Regions 6 and 9 will be available to focus on three major areas: public outreach and involvement, the enhancement of scientific knowledge, and the support of projects that deliver tangible emission reductions. For more information on the program please contact: Jim Yarbrough in Region 6 (214-665-7232); and in Region 9, Christine Vineyard (415-947-4125) or Andrew Steckel (415-947-4115).

Great Lakes Air Deposition Program

EPA is proposing to again target approximately \$1.2 million in STAG resources to support the Great Lakes Air Deposition program (GLAD). GLAD supports improvements to, and applications of, multi-media strategy development and assessment tools needed to identify the contribution and effects of toxic air deposition to the Great Lakes region. Atmospheric deposition of air toxics is known to be one of the main environmental drivers negatively affecting the water quality and ecosystem health of the Great Lakes.

EPA, the eight Great Lakes states, and the Great Lakes Commission (GLC) work together to support GLAD activities based on the information needs of regulators and the relevance to toxics efforts. In FY 2007, all funds allocated to the Great Lakes were awarded fully to the GLC, a multi-jurisdictional organization representing the eight Great Lakes states. For the past decade, the GLC has coordinated the Great Lakes regional air toxics inventory project. Starting in FY 2004, the GLC also began coordinating the award of additional funding to meet the research needs of state agencies. The project activities, outcomes and funding priorities are state-driven. Representatives from the eight Great Lakes states provide significant input to the GLC in the selection of award recipients for projects in the Region through participation on project management and technical review teams.

Priority activities of the program include: identification of air toxics sources, development of accurate and comprehensive air toxics emission inventories, monitoring of air toxics deposition, modeling of atmospheric dispersion and deposition of toxic pollutants, assessment of long-range atmospheric transport of toxic pollutants to the Great Lakes region, and assessment of the effects of atmospheric toxic pollutants on fish and wildlife. These activities are consistent with the goals of the CAA, the Great Lakes Binational Toxics Strategy, the Great Waters Program, and the Office of Water's Total Maximum Daily Load (TMDL) Program. Development of this information is critical in establishing the basis to create further regulations and strategies to minimize atmospheric loadings to the Great Lakes and other inland water bodies. The results of this work are used to guide federal, state, and local policy for the Great Lakes and other fresh water ecosystems.

Previous efforts funded under this program have focused on the atmospheric deposition of mercury to lakes and land, a national priority and a global concern. In addition, the development of atmospheric deposition analyses and robust toxic inventories are critical in

establishing the basis to develop further state regulations and strategies to minimize atmospheric loadings to the Great Lakes and other inland water bodies.

Current projects focus on topics including: developing techniques for improved real time monitoring, collecting important data to fill gaps such as dioxin and speciated mercury monitoring; measuring of emerging chemicals of concern such as polybrominated diphenyl ethers and brominated flame retardants; studying human health impacts of Great Lakes fish consumption; identifying potential sources of toxic releases; and modeling deposition and transport of PBT chemicals in the Great Lakes Region.

Funding also supports the Great Lakes Regional Toxics Air Emissions Inventory Project. This project is helping create a comprehensive inventory of toxic air contaminant releases throughout the Great Lakes region from point, area, and mobile sources. The project develops a comprehensive inventory every 3 years (to match national efforts). Inventories are developed and delivered over a three year time frame. The next complete inventory, representing 2005 emissions, should be completed in CY 2007. This 2005 regional inventory is especially important because U.S. EPA will not be developing a national inventory reflecting 2005 information. The inventory project is supported by the Directors of the Great Lakes states since it provides information to help develop their state inventories, enhance QA/QC efforts, and to improve coordination at a regional level. For example, information was used: by the Bi-national Toxics Strategy B(a)P workgroup to target reduction strategies for states, by Wisconsin in its state-wide air toxics risk assessment, and in the NEPA Environmental Impact Statement analysis for Chicago's O'Hare Airport. Inventory information will also continue to be incorporated into national air toxics assessment efforts.

Specific FY 2008 projects have not yet been determined, but EPA will continue to work closely with the GLC and the Great Lakes states to see continued improvement and application of multi-media strategies to address air deposition. EPA will highlight priority projects based on the regulatory and scientific needs of the Great Lakes states. In addition, research information and data collected as part of this effort will be shared via a Great Lakes Commission website. For more information, including guidance on those entities eligible for receipt of funds, contact Julie Henning at 312-886-4882 or Erin Newman at 312-886-4587.

Multi-State Programs

Regional Haze Planning Organizations

The President's budget request for FY2008 includes \$1.0 million for Regional Haze Planning Organizations (RPOs). Regional Haze State Implementation Plans (SIPs) are to be submitted by the States by December 17, 2007 and the RPOs will continue to provide the States with the needed materials to complete final preparation of their Regional Haze SIPs in order for them to meet their December due date and implement their plans. Due to the series of Continuing Resolutions that the Agency has operated under in FY 2007, the final FY 2007 funding level, allocation and availability of funds for RPOs has not yet been determined. The FY 2006 enacted level totaled over \$4.9 million. The President's FY 2007 request for RPOs totaled \$2.5 million. As soon as the FY 2007 STAG funding level is clear, OAR, working with

the RPOs, will move forward quickly to award the FY 2007 funds. For additional information contact Jerry Stubberfield at 919-541-0876.

Northeast Ozone Transport Commission (OTC)

The OTC was created pursuant to sections 176A and 184 of the CAA. The OTC represents Northeastern and Mid-Atlantic states in the Ozone Transport Region (OTR) in: (a) assessing interstate transport of ozone and its precursors; and (b) determining the need for, and appropriateness of, additional control measures within the OTR, or areas affecting the OTR. The OTC is supported by a small executive staff that functions largely to coordinate OTC activities, facilitate communication among members, and serve as the point of contact for organizations external to the OTC, including EPA. The OTC Executive Director also serves on the CAAAC, a senior-level Federal Advisory Committee established in 1990 to advise EPA on issues related to implementing the Clean Air Act Amendments of 1990. The OTC also serves as the regional haze planning organization for the OTR, in concert with the Northeast States for Coordinated Air Use Management and the Mid-Atlantic Regional Air Management Association.

For FY 2007-2009, the OTC's work continues to focus on six areas: general analytical support to member states; analysis of mobile, stationary, and area source measures, particularly new clean air technologies; member communications; solicitation of non-governmental stakeholder input; coordination with other organizations; and consensus building. The focus areas are supported by OTC committees that develop and recommend specific action items for the Commission and the member states. The OTC implements its policy recommendations through consensus resolutions and draft model rules that provide guidance to member states. EPA is seeking comment on the appropriate level of funding for OTC activities. For more information contact Pat Childers at EPA at 202-564-1082.

National Association of Clean Air Agencies

The National Association of Clean Air Agencies or NACAA (formerly STAPPA-ALAPCO) is the national association of state, territorial, and local air pollution control agencies in the United States. NACAA is supported with a small staff or Secretariat located in Washington, D.C. The objective of the Secretariat is to coordinate the air quality activities of state and local air pollution control officials at the national level and to engage in activities that enhance the effectiveness of their agencies. The Secretariat disseminates information through a variety of means (e.g., electronic newsletter, website, email, technical committees), plans and sponsors conferences and technical workshops (e.g., mobile source air quality, air pollution awareness, membership meetings) serves as a state/local liaison to EPA, coordinates member participation on EPA and joint State-EPA technical committees, produces technical assistance for members such as model rules and implementation strategies, and addresses air pollution control issues in concert with other public and private interests.

Highlights

- Name Change as NACAA.
- Co-regulator entity.
- New 2-year request
- Prior concurrence of state environmental agency head required.

Funding for the Secretariat has been identified as part of the national allocation at the request of the member state and local air pollution control agencies for numerous years. A jurisdiction not participating in NACAA does not provide any of its allotted funds for support of

the Secretariat. Traditionally, the NACAA executive board (comprised of state and local air pollution control officials) act on a request from the Secretariat for a two-year period and request that EPA set aside funds from the participating state and local agencies' grant funds on a proportional (i.e., population) basis. As NACAA is forward-funded, these funds would go to support the Secretariat for the ensuing fiscal year.

As noted earlier, over the past year EPA has received several inquiries from States and members of Congress about how the Agency funds co-regulator organizations using STAG funds. In order to assure that State preferences are being followed OARM has determined that each Region must now ensure that the head of any State environmental agency or department that wishes to provide a portion of its STAG support to NACAA provide their prior concurrence to do so. This concurrence is required before EPA can take any STAG funds off-the-top to fund a co-regulator organization such as NACAA with a direct grant. Since NACAA membership is composed of both state and local direct-funded grant recipients, the head of a direct funded local agency should also inform EPA of that jurisdiction's concurrence. Pass-through local agencies do not have a direct grant relationship with EPA and would need to consult with their state.

The state and local membership of NACAA has approved a two-year request for the period of FY 2008 through FY 2009. NACAA is proposing to submit an EPA-related funding budget totaling just over \$1.575 million in FY 2007 STAG funds for its FY 2008 grant year. Of this amount, approximately \$1.5 million was requested of EPA to be set-aside from member state and local agencies. The balance would be direct-billed to the six member states preferring that payment approach. The final FY 2008 funding level (for the Secretariat's FY 2009 grant year) has been proposed at \$1.65 million. Of this amount \$1.58 million constitutes a request of direct funds to be reserved by EPA.

The actual award would depend upon further consultation with, and the documented concurrence of, the affected state environmental and air pollution control agency heads. This can be accomplished as part of the state's annual grant negotiations or via a separate process determined by the EPA Regional Office in concert with the affected states. EPA would still need to review and formally approve the application package. EPA will provide a state-by-state breakout of share contributions once the all concurrences are received. For more information, contact William Houck at 202-564-1349 or via email at – houck.william@epa.gov.

State Program Support

NOx Budget and CAIR Seasonal Trading Programs

NOx emissions from electric power generation and other major stationary sources contribute significantly to the formation of ground-level ozone, a serious public health and environmental problem. Long-range transport of ozone and precursor pollutants means that problem analysis and mitigation must involve all of the jurisdictions with sources contributing to, and populations affected by, these pollutants. Experience has demonstrated that one of the most effective ways to achieve this is through a multi-jurisdictional, market-based approach using a well-designed, centrally-administered NOx

Highlights

- NOx Budget program begins phasing into CAIR Seasonal program.
- New states are added.
- Overall program costs are lower.

emissions budget and trading system. States affected by the NOx SIP Call have adopted this approach as part of their NOx State Implementation Plans.

For FY 2006, OAR allocated over \$2.5 million for support of the NOx Budget Program (NBP) for states affected under Phase I of the NOx SIP Call. There were 2,570 affected NBP

Table A-2. Changes in the NOx Budget/CAIR Seasonal Program

Region/ State	NOx Budget Program Cost FY2006	Units in CAIR Seasonal Program (Updated 10/01/2006)	CAIR Seasonal Program Cost* FY2007-2008
Region 1	\$204,101	173	\$115,045
Connecticut	\$65,216	62	\$41,230
Massachusetts	\$114,731	90	\$59,850
New Hampshire	\$13,285	10	\$6,650
Rhode Island	\$10,869	11	\$7,315
Region 2	\$596,603	541	\$359,765
New Jersey	\$216,178	178	\$118,370
New York	\$380,425	363	\$241,395
Region 3	\$559,165	523	\$347,795
Delaware	\$41,062	40	\$26,600
District of Columbia	\$9,662	5	\$3,325
Maryland	\$78,500	50	\$33,250
Pennsylvania	\$260,863	211	\$140,315
Virginia	\$101,447	137	\$91,105
West Virginia	\$67,631	80	\$53,200
Region 4	\$513,272	1,001	\$665,665
Alabama	\$83,331	126	\$83,790
Florida		299	\$198,835
Kentucky	\$90,577	109	\$72,485
Mississippi		103	\$68,495
North Carolina	\$129,224	159	\$105,735
South Carolina	\$90,577	100	\$66,500
Tennessee	\$119,562	105	\$69,825
Region 5	\$642,496	924	\$609,856
Illinois	\$178,739	280	\$181,596
Indiana	\$169,078	187	\$124,355
Michigan	\$119,562	158	\$105,070
Ohio	\$175,116	193	\$128,345
Wisconsin		106	\$70,490
Region 6		156	\$103,740
Arkansas		49	\$32,585
Louisiana		107	\$71,155
Region 7	\$21,739	189	\$125,685
Iowa		68	\$45,220
Missouri	\$21,739	121	\$80,465
Total Annual \$	\$2,537,376	3,507	\$2,327,551

* Processing cost/source = \$665

sources in 2005 and all were required to comply for the full ozone season, May 1 through September 30. Through a wide range of pollution control strategies and an active NOx

allowance trading market in 2005, sources achieved over 99 percent compliance with the NBP. Allowance trading activity increased from 2004 to 2005 and the volume of emissions data processed by EPA has increased almost 300% over the original OTC Program. In FY 2007, the program incorporated an additional Midwest state and more sources under Phase II of the SIP Call. In FY 2008, units in six additional states affected by the CAIR seasonal NO_x program will begin monitoring and reporting emissions data. EPA will also continue assisting the present NBP states in transitioning their sources and allowances into the CAIR seasonal NO_x trading program.

In FY 2007, EPA further automated the compliance determination process known as “True Up,” enabling states to get official results for their sources sooner. In addition, EPA continued development and testing of the Emissions Collection and Monitoring Plan System (ECMPS) which will provide users with a single client tool for checking and submitting data, direct access to EPA’s database via this tool, and the ability to quality assure data prior to submission. Additional information on the ECMPS, including schedules for beta testing and system roll out may be found at www.epa.gov/airmarkets/business/ecmps/index.html. Several software development activities to contain or lower program operating costs are nearing completion and, as a result, the processing costs per source have been reduced. OAR will allocate approximately \$2.3 million annually in FY 2007 and FY 2008 across the NBP states and the new CAIR seasonal states for operation of this program.

EPA’s administration of the trading program on behalf of the states through a national contract is considered associated program support. Through FY 2006, support for the NO_x Budget program has come from the grant funds of the affected states. State shares are based on the number of affected sources per state times a unit cost per source. Funds that would normally go to the states through EPA’s region-by-region allotment are instead targeted to support the Budget program in advance of actual allotment to the affected states. Accordingly, this support is not included in individual state grant agreements and does not affect a state’s cost-sharing requirements. Jurisdictions not affected or not participating in the trading programs have not had to contribute their grant resources to support them. For example, Georgia is not included in the system.

For fiscal years 2007 and 2008, because of operating efficiencies, NO_x/CAIR program costs are anticipated to decrease relative to FY 2006 at the same time that additional sources and additional states are being added to the program (see table A-2). Accordingly, the contributions of states in the program in FY 2006 will remain the same or be reduced. States joining the program in FY 2007 would show a new contribution based upon their cost per unit (source).

For more information contact Larry Kertcher at 202-343-9121 or Doris Price at 202-343-9067.

Clean Air Act Training

CAA §103(b) authorizes EPA to provide training for air pollution control personnel and agencies and to make training grants to air pollution control agencies and other qualified entities related to the causes, effects, extent, prevention and control of air pollution. In addition to the Agency resources that EPA targets, EPA proposes to target approximately \$2 million in STAG funds for the support of Clean Air Act training provided by multi-jurisdictional organizations

and other state/local academic organizations in FY 2008. This is the same level of funds identified in FY 2007 and is subject to consultation and concurrence with participating state and local air pollution control agencies. EPA is seeking comment on the level and approach taken to funding CAA-related training in FY 2008 and beyond. For more information contact Debbie Stackhouse in the Office of Air Quality Planning and Standards at 919-541-5281.

Section IV. AMBIENT MONITORING

Revisions to the National Ambient Air Monitoring Regulations and the Draft National Ambient Air Monitoring Strategy

On October 17, 2006 EPA finalized revisions to the National Ambient Air Quality Standard (NAAQS) for particulate matter. In a separate final rule on this same date, EPA also finalized a major restructuring of the ambient air monitoring regulations. Together, the revisions restructure the networks for criteria pollutant monitoring of both gases and particulate matter. Consultation with, and peer review from, the Clean Air Scientific Advisory Committee (CASAC) and its Ambient Air Monitoring and Methods Subcommittee has driven the changes to the PM NAAQS and related PM monitoring rule changes. The rest of the final rule changes, some of which affect PM NAAQS monitoring, are based on the recommendations from the December 2005 draft National Ambient Air Monitoring Strategy (NAAMS) (see <http://www.epa.gov/ttn/amtic/monstratdoc.html>).

Monitoring Highlights

- Implications of a stronger PM_{2.5} daily NAAQS
- Revised monitoring regulations has several potential effects:
 - Reduced or eliminated monitoring requirements for CO, SO₂, NO₂, Pb, and PM₁₀
 - Daily sampling requirement for some PM_{2.5} design value sites
 - Changes in the minimum monitoring requirements for PM_{2.5} and Ozone
 - Reinvention of the quality assurance program
 - Multipollutant monitoring at NCore stations
 - Provisions for approval of continuous PM methods
 - More flexibility in the PAMS program
- Comment sought on overall priorities and allocation of funds for monitoring.
- Assessment of IMPROVE.
- Tribal air monitoring considerations.

The draft national strategy has been developed over the last several years by EPA and it's State, local and Tribal partners that operate the nation's ambient air monitoring networks. A major purpose of the strategy is to optimize the networks to be more responsive to current and future needs (e.g., assess air quality trends, better characterize the multi-pollutant nature of air pollution, provide for more timely information through continuous monitoring, better support development of improved air quality simulation models, etc.). Accordingly, the new monitoring regulations: remove network minimums for some pollutants, lower minimum requirements for others, eliminate the National Air Monitoring Station (NAMS) designation, and reduce the requirements for photochemical assessment monitoring stations (PAMS).

New monitoring, including measurement of PM_{10-2.5} is required at multi-pollutant monitoring stations called NCore sites. While this new initiative is not required within the 2008 grant period, EPA is seeking comment on the extent to which state and local agencies will be able to re-orient their monitoring programs in FY 2008 to prepare for it. Specifically, EPA is soliciting input on the barriers and recommended solutions for shutting down low value criteria pollutant monitoring sites so these resources can be invested to higher value monitoring such as NCore, speciation, and special purpose monitoring.

This document provides guidance for the use of particulate matter (PM), other criteria pollutants, PAMS, and air toxics monitoring resources, and reflects the emerging direction provided for in the draft national strategy. For applicable monitoring of PM, PM speciation, other criteria pollutants, PAMS, and NCore multi-pollutant sites, this guidance has been prepared consistent with the revisions to the ambient air monitoring regulations. Accordingly, comment is being sought on numerous areas proposed for change.

Highlights of Proposed Changes in Monitoring Funding for FY 2008

At the time of writing this draft grant guidance, EPA is operating on a full-year continuing resolution for funding of its programs as well as the grants it negotiates with State and local agencies for 2007. At this point it is not yet certain what the final level of funds will be for PM_{2.5} monitoring or how that level will affect the length of time that monitoring agencies may be able to sustain their current PM_{2.5} monitoring operations. Therefore, EPA is not yet presenting a draft EPA Regional Office PM_{2.5} monitoring allocation for 2008. However, this guidance highlights the needs for 2008 based on recent changes to the PM NAAQS and other changes brought about through the October 17, 2006 final rule on revisions to the ambient air monitoring regulations as well as implementation of the National Ambient Air Monitoring Strategy. Key areas proposed are noted below.

- The FY 2008 President's budget request includes \$25.5M for the PM_{2.5} monitoring program, representing 60 percent of the \$42.5M historically provided for the PM_{2.5} monitoring program. The President's budget does not include §103 authority for PM_{2.5} monitoring. This means the program will be included in the continuing §105 program which requires a recipient match of 40 percent for the entire state or local government. In developing the final guidance, EPA's priority will be that essential monitoring for protection of public health from PM exposure above the NAAQS will not be compromised. It is EPA's intention to negotiate grant work plans and accountability measures that ensure that available federal funding also is used only for PM_{2.5} monitoring activities.
- Recent changes to the monitoring regulations provide an opportunity for divestment of low-value monitoring for several NAAQS pollutants (i.e., CO, SO₂, NO₂, Pb, and PM₁₀). EPA anticipates monitoring reductions for these pollutants. Such reductions are anticipated in the draft National Ambient Air Monitoring Strategy and are facilitated by the changes in the monitoring regulations mentioned above. EPA is seeking comment on the areas of monitoring that should be identified for disinvestment.
- There will be some shifts in funding for PM_{2.5} filters and speciation laboratory costs due to pre-negotiated contract increases in unit prices.
- EPA invites comment and will be consulting with State/local officials regarding the funding approach for: support of ammonia monitoring at some NCore multi-pollutant monitoring stations; changes to the funding allocations for the network of continuous speciation monitoring stations; coverage for daily metals speciation at a small number of sites (3-7 sites may be targeted for 2008) that would be beneficial for both health studies, early investigation of problems associated with days above the daily NAAQS, and developing and tracking State Implementation Plans (SIPs) and changes to funding for the IMPROVE program.

- The level of funds for the nationally administered, independent quality assurance program for PM_{2.5} monitoring is expected to be approximately \$1.5 million. This reflects an implementation strategy which optimizes the number of performance evaluation samples collected in each reporting organization (i.e., effectively reducing the number of performance evaluations collected in large organizations while increasing some in smaller organizations). Funding needed for the quality assurance program may be less than \$1.5 million if networks become smaller due to funding limitations in FY2008.
- The FY 2008 allocation will consider the cost of required daily PM_{2.5} sampling in areas where this additional requirement applies. Additional adjustments for PM_{2.5} FRM/FEM sampling are expected to be part of the larger STAG reallocation process currently underway. Although a preliminary Region-by-Region allocation has not been provided at this time, EPA is still interested in receiving input from monitoring agencies on how to prioritize FRM/FEM monitoring needs.

While EPA considers the existing PM_{2.5} FRM/FEM network adequate for implementing the revised NAAQS, changes in population exposure and emissions patterns may mean that a small number of sites each year may need to be re-located. Therefore, EPA is asking its Regional Offices and the States to consider: (a) whether the current network of FRM/FEM and supplemental PM_{2.5} speciation sites is optimal for supporting implementation of the revised PM_{2.5} NAAQS, and (b) how samplers among stations and even funds among states would need to be shifted to provide equitable access to the speciation data needed to understand the causes of 24-hour NAAQS nonattainment for each prospective nonattainment area.

- EPA is protecting the public from effects of short-term exposure to inhalable coarse particles by retaining the existing daily PM₁₀ standard. While EPA decided against setting a PM_{10-2.5} NAAQS, the Agency did finalize a PM_{10-2.5} reference method. EPA also believes that it will be useful to develop a data set of PM_{10-2.5} mass and speciation monitoring data in a variety of locations over the next several years to better inform health studies and subsequent policy decisions on protection from coarse particles.

Through NCore multi-pollutant monitoring, EPA is requiring PM_{10-2.5} mass and speciation at between 62 and 71 locations. Since NCore is not required to be operational until January 1, 2011, the FY 2008 allocation does not specifically target funds for the creation of PM_{10-2.5} mass or speciation measurements. Also, while PM_{10-2.5} mass measurements can be easily obtained using collocated low-volume PM₁₀ and PM_{2.5} samplers, EPA has not fully researched and developed a method for PM_{10-2.5} speciation. For 2008 EPA encourages the mass measurement of PM_{10-2.5} at NCore and other important sites as determined within monitoring agencies. Since PM_{10-2.5} speciation is not fully developed, EPA is only encouraging this measurement as part of special projects and studies designed to address specific issues and not part of any routine monitoring operation. EPA is interested in receiving input on the usefulness of PM_{10-2.5} mass and speciation measurements from monitoring agencies as well as the relative priority compared to other routine measurement systems being required of States.

- For 2008 EPA anticipates a stable network of speciation trends sites. However, some of the supplemental speciation and State protocol IMPROVE sites may move due to network needs or shut down due to funding limitations. For supplemental speciation sites, States may want to consider reducing the sampling frequency of supplemental stations, or obtaining speciation of

only ions, carbonaceous material, or only metals/elements, based on which of these is the most valuable given a reconsideration of each station's appropriate data objectives.

- In FY2009, EPA also anticipate that there may be shifts in PM_{2.5} monitoring funds among Regions to reflect further transition to continuous PM_{2.5} instruments, addition of precursor gas monitoring capability at NCore multi-pollutant sites, and discontinuation of additional PM_{2.5} speciation sites.

Fine Particulate (PM_{2.5}) Monitoring Network

On October 17, 2006 EPA revised the PM_{2.5} NAAQS by lowering the 24-hour (or daily) standard from 65µg/m³ to 35µg/m³. EPA also retained the existing annual fine particle standard at 15 µg/m³. In both the pre-existing and new monitoring rules supporting the PM_{2.5} NAAQS, EPA requires monitoring agencies to locate at least one PM_{2.5} monitoring site for each MSA in a population-oriented area of expected maximum concentration. Under the former PM_{2.5} NAAQS, the design values for almost all non-attainment areas were driven by the annual NAAQS. With the new lower PM_{2.5} daily NAAQS, a majority of areas will be driven by the daily NAAQS. However, in most cases the area of expected maximum concentration will be the same.

In planning a PM_{2.5} monitoring network for 2008, agencies will need to consider how their networks are addressing the network design requirements as part of their annual network reviews due this coming summer. In a small number of cases, a new monitoring site may need to start up; in other cases, sites may need to move. Overall, fewer sites will be required under the new monitoring requirements due to less sites being required in large urban areas and by eliminating a requirement for monitoring in areas outside of a metropolitan area other than background and transport sites. Although fewer sites are required, EPA envisions maintaining a large robust network of PM_{2.5} monitors to support several monitoring objectives including protection of public health through the NAAQS.

The PM_{2.5} monitoring network includes three well-established components: the network of filter-based Federal Reference Method (FRM)/Federal Equivalent Method (FEMs) used for comparison to the NAAQS; continuous mass monitors used in public reporting of the Air Quality Index; and speciation program samplers and monitors including the Speciation Trends Network, supplemental speciation sites, and the IMPROVE program used to characterize the chemical composition that makes up fine particulate matter. Smaller dynamic components of the PM_{2.5} monitoring program include the network of continuous speciation monitors and the NCore multi-pollutant measurements that are precursors to PM_{2.5}.

Using data from several components of the PM_{2.5} monitoring network and data from other monitoring conducted by State, local and Tribal Agencies, a series of monitoring assessments have been performed over the last several years to facilitate decision making on which PM_{2.5} monitoring sites should be retained and where new investments should be made. The assessments identified several potential areas for divestment and reinvestment. Areas of interest to enhance PM monitoring included reinvesting monitoring resources for precursor level monitoring of CO, SO₂, and NO₂/NO_y monitoring to better characterize gases that lead to particle formation; and for a larger network of PM_{2.5} continuous monitors.

In December of 2005, EPA posted its Draft of the National Ambient Air Monitoring Strategy (NAAMS) on EPA's website at <http://www.epa.gov/ttn/amtic/monstratdoc.html>. This latest version of the strategy includes an implementation plan describing actions necessary to take conceptual design elements to routine operation. To the extent possible this grant guidance has been developed consistent with the NAAMS as well as the Revisions to the Ambient Air Monitoring Regulations.

Overall Direction

Calendar year 2008 will be the first year where several new monitoring requirements take effect. Specifically any new PM_{2.5} monitoring required as a result of the minimum monitoring requirements specified in Table D-5 of Appendix D to Part 58 takes effect on January 1 of 2008. In the new monitoring requirements, EPA took an approach that considers the relative design value of an MSA and its population to determine the minimal required number of sites for each area. The new monitoring requirements will result in needing to deploy additional monitors for approximately a dozen MSA's. Overall, this is only a small fraction of the more than 900 FRM/FEM samplers that are operational. All the minimal monitoring requirements, including these new dozen sites, will be considered first in any prioritization of funding for PM_{2.5} monitoring.

FY 2008 continues a multi-year transition of the ambient air monitoring conducted by state and local air monitoring agencies along the path set by the draft of the NAAMS. For PM_{2.5} this means continued operation of high value federal reference method (FRM) and speciation sites; PM_{2.5} continuous monitoring and associated data management systems for timely reporting of high quality data; and precursor gas analyzers, data analyses and quality assurance activities that will support better understanding of particle formation.

The restructured networks will continue operation of high value sites, with investments and divestments. To provide a more clear understanding of the expected outcomes of the ambient air monitoring objectives, the following goals for the fine particulate monitoring network have been developed:

- Appropriate spatial characterization of PM_{2.5} NAAQS;
- Public Reporting of PM_{2.5} in the AQI;
- Characterization of PM_{2.5} chemical speciation data for long term trends, development and accountability of emission control programs, tracking of regional haze, and for use in health studies;
- Implementation of NCore CO, SO₂, NO₂/NO_y and NH₃ trace-level monitoring to support characterization of PM precursors;
- Assessment of PM_{2.5} data quality;
- Procurement and testing of PM_{2.5} filters.

Divestments

In the revisions to the ambient air monitoring regulations, EPA finalized reductions to the required number of FRM/FEM in larger cities and eliminated FRM/FEM requirements for some rural areas. For some areas, especially large cities well below the proposed NAAQS, this may provide an opportunity to divest of one or more redundant monitoring sites. For other areas it may provide an opportunity to move one or more sites, which are not the design value sites, to

get a better spatial characterization of PM_{2.5} or seek locations that may potentially be a concern with a lower daily PM_{2.5} NAAQS, as currently proposed.

In the FY 2006 and FY2007 National Program and Grant Guidance, EPA discussed the divestment of approximately 40 PM_{2.5} supplemental speciation sites operated by state and local agencies. While EPA is not seeking additional reductions in the remaining supplemental sites, States and local agencies may consider additional divestments in areas that are not expected to be in violation of the existing or proposed PM_{2.5} NAAQS. Chemical speciation data from the Speciation Trends Network, IMPROVE, and the remaining supplemental speciation sites will continue to be utilized to track progress over time as the national and local control programs are implemented. There are some areas that are expected to be in residual nonattainment for PM_{2.5} even after the national control strategies are implemented that may have attainment deadlines beyond 2009, or that may be designated nonattainment with the revised 24-hour PM_{2.5} NAAQS. In these cases the Regional Office and the State, and where appropriate, local agencies, should work out an appropriate network design for the chemical speciation component of their PM_{2.5} monitoring network with the available allocation, as part of their annual network review.

In the revisions to the ambient air monitoring regulations EPA finalized new requirements for the number of required Performance Evaluations (PE) that result in an overall national reduction in the required number of PE's to be collected. It is anticipated that costs of the PE will be about \$1.5 million for FY08 which is approximately \$250K less than FY 2006 under the older requirements. Costs for the PEP to a monitoring organization are determined by the number of sites within a monitoring organization.

As in 2007, for 2008 monitoring organizations will be asked to determine whether they plan on implementing the PM_{2.5} Performance Evaluation Program (PEP) or allow for continued Federal implementation of this program. Monitoring organizations must meet the minimum requirements of adequate and independent in order to implement the PEP. Information on this decision process will be provided in a memorandum from the EPA Regional Office to the monitoring organizations at the beginning of each year in order to make decisions that will affect the next calendar year audit activities. OAQPS anticipates that a FY 2008 guidance memorandum covering details on participation in the PM_{2.5} PEP will be issued to the EPA Regional Offices in April, 2007.

Investments

The Revisions to the Ambient Air Monitoring Regulations published in the Federal Register on October 17, 2006 include new performance based criteria for approval of continuous PM_{2.5} methods as equivalent to the filter-based FRM. These new criteria may result in PM_{2.5} continuous methods appropriate for comparison to the NAAQS and for public reporting of the Air Quality Index (AQI). If one or more of these methods are approved, monitoring agencies could benefit by discontinuing operation of some or all of the FRMs, which tend to be costly to operate due to pre- and post- sampling laboratory analysis. These savings could be used to pay for some of the cost of the new monitors; however, capital acquisition funds would need to be provided up-front for the new monitors. Therefore, EPA will work closely with State and local agencies within the existing funding allocations on whether new monitors should be purchased, if one or more PM_{2.5} continuous methods become approved for comparison to the NAAQS.

Gas monitoring with high sensitivity measurements of CO, SO₂, and NO/NO_y will continue as part of the PM_{2.5} monitoring network to support characterization of PM precursors in FY 2008. Planning over the last few years has resulted in funding being available for up to 35 NCore multi-pollutant sites using carryover and FY2005 and FY2006 funds. In FY 2007 EPA did not anticipate adding any new sites. The EPA has proposed a several year implementation of the NCore network with the full network deployed by January 1, 2011. This implementation schedule allows sufficient time to pause before additional new sites are deployed and consider any input from the States on how to best operate and utilize data from the NCore network. The existing 35 sites are anticipated to provide sufficient information to test the operational capability of the network.

During the last year EPA learned that one of the three primary FRMs used across the nations monitoring network would no longer be commercially available. The instrument manufacturer of the Andersen FRM samplers was sold to what is now Thermo-Fisher, which also supplies R&P FRM samplers. As a result the instrument manufacturer has stated that it will attempt to continue supplying parts as they are available, but that it could not guarantee spare part availability and that it would eventually no longer support the FRM. Although Andersen FRMs are not used in an extensive number of State monitoring programs, they are used in several very large and important - based on having areas of non-attainment (e.g., CA, GA, IL, OH, PA) - State monitoring programs. EPA will be working through its Regional Offices to prioritize replacement of Andersen FRM samplers in cooperation with State and local monitoring programs. EPA is interested in receiving input from State and local agencies about how to best manage replacement of the soon to be obsolete Andersen FRM samplers for all networks where they are operational. While State agencies should be planning and utilizing a portion of their PM_{2.5} grant funds each year to upgrade monitoring equipment, EPA expects that some agencies may need to have their entire network upgraded in a one or two year period.

In addition to nominal replacement of PM_{2.5} monitoring equipment over a several year period, there are a few important equipment issues worth noting in this grant guidance. EPA is continuing to implement a new carbon channel for each speciation monitoring site. EPA proposes to hold \$835,000 in FY 2008 funds at the national level for this effort and working with each monitoring agency directly to install and ensure successful operation of the new carbon channels. EPA was able to pay for this upgrade within the allocation typically used on PM_{2.5} speciation contract support by lowering the shipping costs associated with each sample. The new carbon channel is intended to ensure optimal comparability of carbon data across all speciation network data (i.e., IMPROVE and STN). EPA will also be working with State and local agencies to pilot PM_{2.5} continuous mass monitoring equipment and ammonia sampling equipment where funds are available. Monitoring agencies may also find it useful to use a portion of their direct awards to implement additional meteorology equipment that supports forecasting of the AQI.

For FY 2008, PM_{2.5} monitoring grant funds allocated to states can be directed towards improvements in data management systems to support timely reporting of high quality data from PM continuous mass monitors, PM continuous speciation monitors, and precursor gas monitors. Resources dedicated to this area will support processing, validating, and reporting of data that supports the PM monitoring program.

As in previous years, EPA will continue to work with state and local agencies to identify priorities for national- and regional-level analyses of the PM monitoring program data. The goal of these analyses will be to assess the adequacy of the network in meeting its objective of supporting the air program, and to recommend changes to optimize that support. EPA is proposing that these data analyses will be accomplished by utilizing a portion of the PM_{2.5} monitoring funding (approximately \$126K) for contractor support services. Data analysis specific to the design of local control programs and to track their implementation and effects is not included in this effort. Such state-specific analysis should be conducted with funds allocated for SIP development and implementation. In some cases piloting of data analysis to address a particular issue may be useful to learn whether additional laboratory investigations and data analysis can be successful on a larger basis. In this latter case funds would be eligible for use, even if only directed toward one monitoring agency. EPA is seeking comment on the areas proposed for investment.

Table A-3 provides a historical comparison of FY 2005, FY 2006, FY 2007, and proposed FY 2008 costs associated with the various elements of the PM_{2.5} monitoring network. Table A-4 will give the FY 2008 allocations by Region and category of activity, but cannot be completed until EPA has decided how to allocate the FY 2007 available to it under the year-long continuing resolution. Aggregate funding for in-kind services - where contract costs are known - are provided based on a static number of sites needing these services between FY 2006 and FY 2008. These cost estimates are to help inform how the program costs may change this coming year and are subject to change based on the numbers of sites that will need these services in FY 2008. These numbers may decline if States are unable to maintain their existing PM_{2.5} monitoring networks.

While Tables A-3 and A-4 will provide detailed breakdowns of how the PM_{2.5} monitoring program is allocated by monitoring program area and Region, they do not attempt to list every expense a State or local Agency may have in operating this network. State and local agencies have costs associated with many activities within each monitoring program area. Some of these costs are fairly well understood such as capital infrastructure, salaries of staff and management working on the program, and costs of expendable items used in the program. Less obvious, but important to include in planning operation of a network, are costs of participating in conferences and workshops that support training and building further expertise in agencies operating the network.

For more information on PM_{2.5} monitoring, contact Tim Hanley at 919-541-4417 or via mail at hanley.tim@epa.gov.

Table A-3. Historical Comparison of PM_{2.5} Costs

	FY2005		FY2006		FY2007		FY2008	
	State/local	OAQPS	State/local	OAQPS	State/local	OAQPS	State/local	OAQPS
Operation & Maintenance (O&M) for Federal Reference Method (FRM) sites	\$18,337,500		\$18,060,500		TBD		TBD	
Filter costs		\$452,044		\$299,046		\$439,737	TBD	
IMPROVE in Class I areas		\$3,797,789		\$2,619,790				TBD
State/local Protocol IMPROVE sites		\$957,000		\$1,155,000		TBD		TBD
QA/Performance evaluation Program		\$1,912,000		\$1,834,000	\$54,000	\$1,500,000	TBD	TBD
O&M for chemical speciation sites	\$4,487,000		\$4,306,000		TBD		TBD	
Laboratory analysis	\$413,670	\$6,207,177	\$288,636	\$6,978,568	TBD	TBD	TBD	TBD
O&M for continuous mass sites	\$3,845,620		\$4,394,920		TBD		TBD	
Data Management Systems to Support Real Time Reporting of Data	\$640,200		\$212,000		TBD		TBD	
PM precursors – gas monitor capital acquisition and O/M	\$1,250,000		\$2,098,500		TBD		TBD	
National/Regional Scale Data Analyses		\$200,000		\$253,544		TBD		TBD
Subtotal	\$28,973,990	\$13,526,010	\$29,360,556	\$13,139,444	TBD	TBD	TBD	TBD
Total (Region +HQ)	\$42,500,000		\$42,500,000		\$41.9M (est.)		\$25,500,000	
FY 2006 PM _{2.5} Funds			\$39,000,000					
PM _{2.5} /CASTNET Funds			\$3,500,000					
Percent of Totals	71%	29%	68%	32%	69%	31%	TBD	TBD

Table A-4. Preliminary FY 2008 PM_{2.5} Funds by Category and by Region

	I	II	III	IV	V	VI	VII	VIII	IX	X	TOTAL
Regional Allocations											
O/M for FRM Samplers	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
O/M for Continuous Samplers	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
O/M for Speciation Samplers and Monitors	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
O/M for Precursor Gas Monitors	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Data Management Improvements at S/L's	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Precursor Gas and Other Capital	0	0	0	0	0	0	0	0	0	0	0
State Lab Analysis	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Subtotal	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Nationally Administered											
Filter Cost CY2006	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
QA/FRM and precursor gas Performance Evaluation	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
IMPROVE											TBD
State/local Protocol – IMPROVE	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
PM2.5 Speciation Laboratory Analysis	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
National/Regional Scale Data Analyses											TBD

Monitoring Networks for Other NAAQS Pollutants

Support of Established NAAQS Networks

This section covers monitoring networks for the other pollutants covered by a NAAQS - ozone, CO, SO₂, NO₂, Pb, PM₁₀, and PM_{10-2.5}.⁶ For FY 2008, State and local agencies should continue to improve their monitoring networks for these pollutants by working with their EPA Regional Office to divest of low value monitoring and invest those resources into higher priority monitoring and monitoring related activities. Amendments to the monitoring regulations promulgated on October 17, 2007 provide State and local agencies the flexibility to make these refinements, subject to EPA approval.

Of the criteria pollutants noted above, only ozone (O₃) remains a nationally pervasive pollutant with respect to the health-related levels established by the NAAQS. However, all pollutants are still of interest depending on local needs and use of the data for other monitoring objectives. Gaseous pollutants such as CO, SO₂, and NO₂, if measured with appropriate sensitivity, can be used in analysis and models to evaluate control strategy development for O₃ and fine particles, and to provide accountability for those control strategy programs after they have been implemented. Such an effort represents a multi-pollutant approach to utilizing monitoring data for air quality management. This is consistent with recent critical reviews of EPA's air programs and one of the key aspects of the national monitoring strategy.

For CO, SO₂, NO₂, Pb, PM₁₀ and PAMS, EPA expects monitoring agencies to identify low value monitoring sites and re-target those resources towards higher priority monitoring needs, to monitoring related activities such as data assessment, and quality assurance, and to technology investments. For O₃ (which is measured in part by the Photochemical Assessment Monitoring System network or PAMS), EPA believes there are an appropriate number of monitoring sites nationally, although the locations of these monitoring sites are not always spatially optimized. Thus some areas may have an overabundance of O₃ monitoring sites, while others areas may not have enough.

FY2008 STAG grant funds for the aforementioned ambient monitoring programs should be utilized to provide:

- National and local spatial characterization of O₃ relative to the NAAQS;

6 On October 17, EPA revoked the annual PM10 NAAQS everywhere. 71 FR 61144. The 24-hour PM10 NAAQS was retained everywhere. No NAAQS was established for PM10-2.5. On the same day, EPA also promulgated a Federal Reference Method for PM10-2.5 and certain monitoring requirements for PM10-2.5, with an implementation date of January 1, 2011. 71 FR 61236. A plan for the PM10-2.5 monitoring program is due by July 1, 2009. FY 2008 grant funds should be used to begin development of this plan. EPA is not requiring that any FY 2008 grant funds be used to implement PM10-2.5 monitoring, although that is an eligible use of grant funds where negotiated between a Regional Office and a recipient.

- National and local public reporting of O₃ in the AQI;
- Local public reporting of CO, SO₂, NO₂, and PM₁₀ in the AQI for areas where these pollutants are of concern;
- Local characterization of the CO, SO₂, NO₂, Pb, and PM₁₀ NAAQS in the few areas with NAAQS non-attainment and maintenance issues;
- In addition to the monitoring provided for above, limited characterization of O₃, CO, SO₂, NO₂, Pb, and PM₁₀ data in all other areas for long term trends, support for long-term health and scientific assessments, and development and accountability of emission control programs as part of a multi-pollutant approach to air quality management;
- Assessment of O₃, CO, SO₂, NO₂, Pb, and PM₁₀ data quality;
- Analysis and interpretation of the O₃, PAMS, CO, SO₂, NO₂, Pb, and PM₁₀ monitoring data and development of data assessment tools;
- Procurement and testing of PM₁₀ filters, including PM_{2.5}-type Teflon filters used in low-volume PM₁₀ samplers;
- Development of monitoring plans for PM_{10-2.5};
- Independent and adequate assessment of these pollutants' data quality, which is required in 40 CFR Part 58. This assessment is based on audit data generated under the National Performance Audit Program (NPAP). State and local agencies will choose either to obtain audit services through EPA-managed contracts funded with STAG funds, or may operate equivalent state-managed programs using independent staff, equipment, and standards. In some Regions, Regional Office staff may perform or assist in audits with no charge to STAG funds, depending on staff and travel funds availability.

National Performance Audit Program (NPAP)

The National Performance Audit Program conducts performance evaluations – a type of audit where quantitative data is collected independently in order to evaluate the proficiency of an analyst, laboratory, or some or all of the component parts of a data collection activity. The NPAP is a cooperative effort among OAQPS, the EPA Regional Offices, the monitoring organizations that operate EPA-funded air pollution monitors, and the other organizations that operate air monitors for example at PSD sites. The implementation goals of the NPAP are to audit approximately 20 percent of the monitoring sites in the Ambient Air Quality Monitoring Network each year.

Although it is a goal to visit every monitoring site generating data that has significance to the air quality program within a 5-year period, among these there is an emphasis on auditing higher priority monitors (e.g., sites prioritized for health risk reasons) more frequently. In 2008, the requirement for adequate independent audits applies to sites designated as NAMS/SLAMS/PAMS, and the NPAP program accordingly will cover only these sites; SPMs using FRM or FEM methods become subject to the requirement for adequate and independent audits on January 1, 2009. The NPAP program uses a through-the-probe (TTP) audit system, where appropriate for the monitoring situation given a site's physical layout. This system has the advantage of testing the performance of the entire monitoring station including inlets and

manifolds, and of providing station operators immediate feedback on the accuracy of locally conducted measurements.

Each year, monitoring organizations are asked whether they plan on implementing the National Performance Audit Program (NPAP) or would prefer continued Federal implementation of this program using STAG funds. Any non-EPA audits arranged by monitoring organizations must meet the minimum requirements of being adequate and independent. Additional guidance on demonstrating that a state-implemented program meets these minimums is provided in a memorandum early in the year. Under this approach EPA reserves a portion of appropriated STAG funds to cover potential Federal implementation of the NPAP, based on the number of geographically separate monitoring sites (not the number of distinct monitors) within each EPA Region.

The initial hold back of FY 2008 funds is proposed to be approximately \$500,000. If the number of sites in a Region needing to be audited by EPA staff or EPA-managed contractors is reduced because one or more monitoring organizations plans on implementing a program of adequate and independent NPAP audits without reliance on EPA contractors, and those organizations are assessed by the EPA Regions as capable to perform the NPAP by September 2007, a corresponding amount of STAG funds will be made available to the Regional Office for allocation as direct awards. The September 2007 cutoff date gives EPA time to make necessary contracting and other arrangements for the audits it will manage in 2008.

Photochemical Assessment Monitoring System (PAMS)

Required by section 182(c)(1) of the Clean Air Act, the PAMS program collects ambient air measurements in areas classified as serious, severe, or extreme ozone nonattainment. Each PAMS area collects data for a target list of volatile organic compounds (VOCs), NO_x, NO_y, and ozone, as well as surface and upper air meteorological measurements.

Monitoring rule amendments promulgated on October 17, 2007 greatly reduced the minimum PAMS requirements. The revisions were intended to require the retention of the minimum common PAMS network elements necessary to meet the objectives of every PAMS program, while freeing up resources for states to tailor other features of their own PAMS networks to suit their specific data needs. Overall, the changes significantly reduced the costs of the minimum PAMS monitoring requirements, but it was not EPA's intention to require or encourage a reduction in the overall level of PAMS monitoring. The following summarizes the changes to the PAMS requirements:

- The number of required PAMS sites has been reduced. Only one Type 2 site is required per area regardless of population, and Type 4 sites are no longer required. Only one Type 1 or one Type 3 site is required per area.
- The requirements for speciated VOC measurements has been reduced. Speciated VOC measurements are only required at Type 2 sites and one other site (either Type 1 or Type

3) per PAMS area.

- Carbonyl sampling is no longer required.
- NO₂/NO_x monitors are required only at Type 2 sites.
- Trace level NO₂/NO_y are required at one site per PAMS area (either Type 1 or Type 3).
- Trace level CO is required only at Type 2 sites.

The Regional Offices have been working with the states in 2007 to plan and implement agreed-upon changes in the PAMS networks, but this work may need to continue in 2008.

FY 2008 STAG funds will support four types of PAMS activities: monitoring system implementation and operation, data reporting to AQS, data analysis, and quality assurance. Also, Regions may approve the use of some of these funds to replace or upgrade aging or obsolete equipment. For FY 2008, as in recent years, about \$14 million is targeted for operation of the PAMS network. Of this, \$10.5 million has nominally been allocated for program implementation and operation, data reporting, and QA. \$3.5 million has been nominally allocated for data analysis by state and local agencies. However, Regional Offices have had the flexibility to allow states to adjust this split and even to use a portion of their designated PAMS funds for other purposes. Table A-6 shows the FY2007 allocation of PAMS funds among Regions.

The joint EPA-NACAA reallocation study process now underway also provides EPA and its state/local partners an opportunity to critically re-examine the purposes, funding level, and basis for distribution of funds targeted for PAMS support. A variety of considerations could be involved including accounting for those areas subject to the changing PAMS rule requirements, relative ozone air quality, the robustness of the networks, dollar needs over time, etc. EPA would like to discuss the future of PAMS with the state and local agencies as part of the analysis process.

Whatever approach is determined, the FY 2007 funding level will be the starting point for such an approach - though transition to it may not begin in FY 2008. Notwithstanding a re-allocation, and in light of the recent changes in PAMS requirements, Regional offices should still re-examine the current split between data analysis and implementation and operations with their recipients rather than strictly adhere to the splits shown in Table A-5. Regional Offices may also consider other departures from historical funding practices, for example providing more funds to a particular state in FY 2008 to support a needed one-time intensive study, with temporarily reduced funding for routine PAMS monitoring in other states. In CY 2007 or 2008, EPA will issue a new technical guidance document to assist Regional Offices and states in evaluating the utility of the data collected by current PAMS networks and in identifying new types of PAMS monitoring that can provide useful missing data for ozone attainment planning.

OAR also recognizes that the PAMS sites are a major source of data on air toxics including some of the toxics that contribute significantly to the total risk from air toxics in some of the largest cities. The Regions, state and local monitoring agencies should keep this dual purpose in mind as the plan network changes in FY 2008 and beyond. For example, as speciated

VOC sampling is reduced at type 4 sites, consideration should be given to moving to auto-GC sampling at the remaining PAMS sites.

FY 2008 PAMS Activities for State and Local Agencies

The allocated PAMS funds should be used to meet the following objectives:

(1) Continue System Implementation

- Reduce number of monitoring sites and monitoring at remaining sites, while remaining in compliance with revised PAMS regulations or approved alternative plans developed as part of reconfiguration efforts.
- Operate remaining existing sites.
- Continue to improve NO_x monitoring, replacing NO_x instruments with NO_y/NO instrumentation and/or more sensitive NO₂/NO_x monitors at select PAMS sites.
- Install and operate trace level CO monitors at Type II sites.
- Develop and conduct area specific ozone precursor studies based on area specific needs.
- Continue making surface measurements of wind direction, wind speed, temperature, and humidity at all PAMS sites and additional measurements of solar radiation, ultraviolet radiation, pressure, and precipitation at one site in each PAMS area. Continue making upper-air measurements of wind direction, wind speed, and temperature at a representative location in each PAMS area. The upper-air monitoring program will depend upon region-specific factors such that the optimum design for a given PAMS region is expected to be some combination of remote sensing and conventional atmospheric soundings.
- For PAMS sites collocated with NCore multipollutant precursor gas sites, the meteorological monitoring data for ambient temperature, wind speed, wind direction, relative humidity, barometric pressure, and solar radiation are to be submitted to the AirNow program.

(2) Data Analysis

- Continue to develop and implement PAMS data analysis plans at the state and local levels that demonstrate use of data, provide analyses demonstrating data analysis products and results commensurate with allocated resources targeted for data analysis in grant work plans and the minimum set of PAMS data analyses specified in EPA guidance.
- Use PAMS data to develop and optimize control strategies in State Implementation Plan for ozone.
- Develop trends in ozone precursors, based on PAMS data, that may serve to corroborate “rate-of-progress” and accountability demonstrations.
- Use PAMS data to corroborate ozone precursor emissions inventories and to address transport concerns.

(3) Data Reporting

- All PAMS data, including meteorological data, shall be submitted into AQS consistent with 40 CFR Part 58.
- All PAMS data shall be identified in AQS as monitor type “PAMS” or ‘Unofficial PAMS.’
- Adequate procedures must be developed and followed to ensure proper validation of data prior to submission to AQS.

(4) Quality Assurance

- All sites must have and operate according to a Quality Assurance Project Plan (QAPP) approved by an EPA Regional Office.
- Ensure that adequate and independent audits are conducted for FRM and FEM SLAMS monitors at PAMS sites. These audits are discussed above under ‘National Performance Audit Program (NPAP).’

For more information on PAMS please contact Kevin Cavender (919-541-2364).

Table A-5. Distribution of Funds for PAMS Support

Region	Number of PAMS Areas	Data Analysis	Implementation and Operation	Total
1	5	\$726,297	\$2,125,815	\$2,852,112
2	1	\$232,415	\$571,060	\$803,475
3	3	\$348,623	\$1,087,907	\$1,436,530
4	1	\$145,259	\$366,848	\$512,107
5	2 ¹	\$290,519	\$959,749	\$1,250,268
6	5	\$617,603	\$2,061,029	\$2,678,632
7	0	\$0	\$0	\$0
8	0	\$0	\$0	\$0
9	8 ²	\$1,162,075	\$3,307,303	\$4,469,378
10	0	\$0	\$0	\$0
Totals	24	\$3,522,791	\$10,479,711	\$14,002,502

¹Chicago and Milwaukee have a combined network.

²So. Coast & Mojave Desert AQMDs have a combined network

Air Toxics Monitoring

For FY 2008, the President's request included approximately \$22.3 million in STAG funds to support national air toxics monitoring and characterization activities. This includes \$6.6 million to continue support for ongoing air toxics monitoring activities initiated and conducted by state and local air quality agencies, and \$10 million for: (1) operation and maintenance of the multi-year National Air Toxics Trends Stations (NATTS), and (2) one- or two-year community-scale air toxics monitoring projects (see Table A-6). Included in the NATTS program component are quality assurance and methods development. A data analysis component supports air toxics management efforts in all states, using data from the NATTS and community-scale monitoring programs. FY 2008 will be the sixth year of NATTS data collection, and the fifth year for community-scale projects. The desired program objectives are:

- Establish trends and evaluate the effectiveness of air toxics emissions reduction strategies.
- Characterize the local-scale ambient concentrations that result when air toxics originating from local sources concentrate in relatively small geographical areas, producing the greatest risks to human health.
- Provide data to support, evaluate, and improve emission inventories and air quality models used to develop emission control strategies, perform exposure assessments, and assess program effectiveness.
- Provide data to support scientific studies to better understand the relationship between ambient air toxics concentrations, human exposure, and health effects from these exposures.

The FY 2008 allocation categories and amounts will be the same as for FY 2007. The funding allocation for operation of NATTS sites will be sub-allocated to the Regions with states hosting those sites. The split of funding among the other listed line items in Table A-6 may be adjusted prior to the start of FY2008 based on consultations with state and local air agency representatives. It is expected that the funds for these other listed line items will be used in nationally administered support contracts or competitively awarded to states for specific activities.

The NATTS program component will continue to build on the established quality assurance and methods protocols. Laboratory and field staff are working with EPA to ascertain the optimum methods for capturing and analyzing core pollutants associated with risk, develop performance based quality indicators to prove valid data results that will contribute to our understanding of risks, and stabilize the measurements for all NATTS sites so that comparisons across the nation can be made. In 2006, improved methods for hexavalent chromium and acrolein were developed and implemented by the EPA-managed support contract which provides laboratory analysis for many of the NATTS sites. During FY 2007, EPA is working to have all NATTS grantees which perform their own laboratory analysis (or obtain it through other non-EPA sources) also employ these methods. Documentation is available at: <http://www.epa.gov/ttn/amtic/airtox.html>. With the established protocols and five years of monitoring data in place, the analytical community will continue to assess trends in air toxics concentration levels, and relate that data to levels of risk.

Table A-6. FY 2008 Proposed Funding for National Air Toxics Trends and Community-Scale Monitoring

\$4,484,000	Continued operation and maintenance of the NATTS sites.
\$470,000	NATTS Quality Assurance: includes periodic Proficiency Testing and Technical Systems Audits, and annual data quality assessment via centrally (OAQPS) managed contracts.[NOTE – this amount is being reassessed and may be revised before seeing state/local comments. If it reduced the difference will be added to the Community-scale monitoring projects line item.]
\$300,000	Data Analysis: delineate and assess trends, data and network assessment to include exploration / demonstration of monitoring data utility in providing local scale findings that are useful in S/L/T air quality program management, and Annual Data Analysis Workshop for EPA and S/L/T's to share results; synthesize into annual report.
\$180,000	Methods Development: support for improved air toxics monitoring methodology, especially for priority HAPs for which methods either do not exist, or existing methods have been deemed insufficient to meet end user needs (will consult with stakeholders to determine most appropriate target HAPs to achieve stated goal).
\$4,418,876	Community-scale monitoring projects: grants designed to assist State, local, and Tribal communities conduct one- or two-year monitoring campaigns and data analysis to characterize their local air toxics problems and their causes, and/or track their air toxics reductions efforts.
\$9,852,876	Total Funding

The community-scale projects, identified through competition, are intended to better characterize air toxics problems at the local level and to address those problems through local actions which complement national regulatory requirements. Such monitoring has the potential to elucidate the scope of local air toxic problems, measure what reductions have been achieved through actions taken, and provide information needed for local policy development on reducing emissions from particular sources. While aimed at meeting local data needs, EPA expects that data from these projects will also be valuable to other areas and to the national air toxics programs. Hence, a portion of the air toxics STAG funds are used to organize, summarize, and analyze the air toxics data from the community-scale studies and the NATTS sites (and data from other monitoring efforts) and to communicate the findings to all states involved in air toxics management. This includes a data analysis workshop. For more information contact Michael Jones in OAQPS' Ambient Air Monitoring Group at 1-919-541-0528.

IMPROVE Visibility Monitoring Network

The IMPROVE monitoring program supports the national goal of reducing haze to near natural levels in National Parks and wilderness areas. IMPROVE monitoring sites collect data on visibility, including optical, photographic, and speciated particulate data, though EPA resources are only used for the particle speciation monitoring. EPA works with the Regional Planning Organizations (RPOs) to help states prepare their SIPs for regional haze rule (due

12/07). Data from IMPROVE sites are needed to meet the regional haze rule requirements of states for monitoring Class I area long-term trends through and beyond the 10-year SIP period (2008 to 2018), as well as being useful in the required periodic assessments of progress towards the national visibility goal. States also use data from the IMPROVE network to characterize upwind and background PM₁₀ and PM_{2.5} conditions and to assess source attribution for the PM_{2.5} and PM₁₀ NAAQS in nonattainment areas. The IMPROVE network was started in 1987 as part of a federally-promulgated visibility plan and operated by the Department of the Interior (DOI) under the direction of a multi-agency federal/state steering committee. EPA expanded the original network in FY 1999 and FY 2000 from approximately 30 sites to 110 sites. The expanded network covers all of the CAA Class I areas where visibility is important (except the Bering Sea area which is impractical to monitor). EPA provides state/local air quality management STAG funds to the DOI to help maintain the IMPROVE network because of the importance of IMPROVE data to development of SIPs for both regional visibility and PM NAAQS attainment. The DOI and the other participant organizations contribute in excess of \$3 million of their own funds or in-kind resources per year to support field operations and other monitoring at IMPROVE sites.

For reasons of convenience and/or consistency of data, a number of monitoring organizations have historically chosen to ask the IMPROVE program to provide field technical support and laboratory services for additional sampling stations at locations under their control, using the IMPROVE protocols for sampler design, sampler operation, and laboratory analysis. Data from these additional sites (currently about 60) are managed and made public along with the data from the 110 sites in protected class I areas. The tribal, state, local, and federal monitoring organizations sponsoring these additional sites provide the necessary funding to the IMPROVE contractors through OAQPS, from within whatever budget they otherwise receive for their ambient monitoring programs. This arrangement will continue in FY2008.

Tribal, state, local, and federal monitoring organizations may continue, discontinue, or add sites for the monitoring period which runs from July 1 2008 through June 30, 2009. Once a monitoring organization has identified its source of funds for such sites, it may contact Marc Pitchford (see below) to request monitoring support services and to begin arranging for the necessary funds transfer. Requests should be made as early in calendar year 2008 as possible, but no later than April 30, 2008. Where OAQPS has already been able to verify that a state/local monitoring organization is expected to direct some of its available STAG funding to this type of monitoring, that amount of funding may appear in certain tables of this document under the applicable EPA Regional Office. Because tribal grant workplans for FY2008 funding are not settled at this time in the funding cycle, no information is presented in this document concerning the number or cost of IMPROVE protocol sites that may be operated in Tribal lands for the FY2008 funding period.

After extensive testing to ensure data comparability, the IMPROVE steering committee approved a change in carbon analysis methodology (both analyzer and protocol) to replace their 18-year old analyzer systems with new system for all samples collected starting in 2005. The IMPROVE steering committee also mandated the development and approved for use a revised

algorithm for estimating light extinction from IMPROVE PM speciation data, that is expected to be used by most (perhaps all) states in their Regional Haze Rule SIPs. A revised (incorporating the latest data flags and edits) IMPROVE dataset required by the Regional Haze Rule for the 5-year baseline period (2000 to 2004) was disseminated through the IMPROVE and VIEWS. The Visibility Information Exchange Web System (VIEWS) is a database system and set of online tools originally designed to support the Regional Haze Rule. VIEWS provides easy online access to a wide variety of air quality data and provides online tools for exploring and analyzing these data. It also is used to facilitate the research and understanding of global air quality issues.

For FY 2006, about \$1.2 million of PM_{2.5} monitoring funds were appropriated under §103 authority and about \$2.6 million of state/local STAG funds appropriated under §105 authority were targeted to support aerosol monitoring activities at 110 IMPROVE sites. The inter-agency IMPROVE steering committee has, at OAQPS's request, commissioned a network assessment to identify the degree to which the current monitoring sites represent the visibility-protected class I areas. This assessment demonstrated that 107 of the 110 IMPROVE sites are needed to continue to provide representative monitoring of the 155 visibility protected class I areas (all except Bering Sea), leaving only three sites that could be considered marginally redundant with other sites within a few hundred kilometers. OAQPS will consult with state and local air agency representatives concerning the appropriate level of support for IMPROVE in FY2008. If IMPROVE funding is reduced in FY2008 compared to FY2006-2007, it is OAQPS proposes to retain those funds within the PM-related monitoring program.

For more information on any aspect of the IMPROVE program, contact Marc Pitchford at 702-862-5432.

Planning Information for Ambient Monitoring on Tribal Lands

EPA respects each tribe's sovereign ability to identify its air quality goals and to make monitoring decisions it deems appropriate for its needs. This section addresses issues for consideration when conducting ambient air quality monitoring in the particular context of an EPA grant work plan. There are no Clean Air Act requirements for ambient monitoring on tribal lands, so tribes have flexibility in customizing ambient monitoring to address the many different situations they face in terms of air quality and other environmental concerns. Whatever the local situation, the purpose of any ambient monitoring should be to inform the tribal public about the quality of the air where that quality is in doubt, to assist the tribe in managing its air quality, to help the tribe make the case that other governments or private parties need to control emissions due to their effect on air quality on tribal land, and/or to help track the effects of control actions to verify that they have addressed a problem.

Ambient monitoring may or may not be a good investment of resources compared to other air quality program activities or other environmental program activities. If monitoring is conducted, a tribe's interests can be best served when the type of monitoring is appropriate for the specific situation. For a given tribe, some types of monitoring may be useful, while others

may have little practical use. Resources within the EPA tribal grant program are insufficient to pursue all potentially useful monitoring, so strategic planning based on thoughtful priorities is needed. The EPA Regional Offices will be the principal EPA partners with tribes in this case-by-case planning.

In 2006 and 2007, EPA has emphasized that data from EPA-funded monitors on tribal lands should be available to both EPA and the general public through the AQS or other relevant national data system, once start-up problems are worked out and the data are reliable. In 2007, EPA is working to identify several workable alternatives for data preparation and submission. In awarding grants to tribes with FY 2008 funds, Regional Offices are expected to make sure that tribes will have a way to get data submitted, including QA-related data.

EPA has developed a National Ambient Air Monitoring Strategy that re-examines how the national ambient monitoring programs can be more thoughtfully directed towards their multiple purposes (<http://www.epa.gov/ttn/amtic/monstratdoc.html>). For the most part this strategy addresses situations and considerations relevant to states, rather than the special situations and considerations relevant to tribes. For 2008 and beyond, EPA may provide additional guidance specifically related to tribal air monitoring. Any new guidance will continue to provide flexibility for tribes and Regional Offices to address the many different air quality situations on tribal lands on a case-by-case prioritized basis. See <http://www.epa.gov/oar/tribal/tam.html> for information on the progress in developing new guidance for tribal monitoring.

Technical assistance in conducting ambient monitoring is provided to tribes through the Tribal Air Monitoring Support (TAMS) Center (<http://www4.nau.edu/tams/>). TAMS staff can provide more specific information on any of the types of monitoring described here.

The remainder of this section provides general information that may assist tribes in clarifying their objectives for ambient monitoring and getting started on planning monitoring to meet those objectives.

Air Toxics Monitoring: This may be the type of ambient monitoring of most interest to many tribes, because local sources potentially subject to tribal management can dominate exposures and because public perceptions of air toxic risks can be strong. As with all monitoring, the purpose of monitoring air toxics is to identify problems that merit action, plan what action will be effective, and track the effects of the action to verify it has addressed the problem. Of the 188 officially listed air toxic compounds under the Clean Air Act, a subset of 18 are currently routinely monitored at EPA-funded non-tribal sites.⁷ This subset will be reviewed during 2006 and may be expanded for 2007 monitoring. Tribal monitoring likely should not aim beyond this list or its revision without specific local reasons, and should not necessarily attempt to measure all of these. While many other compounds will be collected on the same filter or

⁷ These monitored compounds are: benzene, carbon tetrachloride, chloroform, 1,3-butadiene, 1,2-dichloropropane, methylene chloride, tetrachloroethylene, trichloroethylene, vinyl chloride, arsenic and compounds, beryllium and compounds, cadmium and compounds, Hexavalent chromium, lead and compounds, manganese and compounds, nickel and compounds, acetaldehyde, formaldehyde, and acrolein.

cartridge, or in the same canister, there is extra cost at the laboratory for each compound that is measured and reported. Some of the compounds on this list, for example carbon tetrachloride, are not emitted (or not supposed to be emitted) from any current source and/or have about the same concentration everywhere in the U.S. so there is little to be gained from measuring them on any particular reservation.

For many air toxics (excepting some gases), samples need to be collected in the field (or indoors) and shipped to specialized laboratories for analysis. EPA has contracts with qualified labs which make it relatively easy to have this done.

Interpreting air toxics monitoring data is not a simple task, since there are no bright legal lines between “acceptable” and “unacceptable” air quality, as there are for NAAQS pollutants. Interpretation can be more difficult or impossible if the monitoring location or the monitoring schedule is not appropriate for estimating risk to residents. Each Regional Office has specialists in risk assessment who can assist tribes in planning air toxics monitoring so that it is useful.

See <http://www.epa.gov/air/tribal/airtoxics.html> for more information on air toxics from a tribal perspective. See <http://www.epa.gov/ttn/amtic/airtoxpg.html> for information on monitoring of air toxics. See <http://www.epa.gov/ttn/atw/nata/> for the 1999 National Scale National Air Toxics Assessment website; the information and links on this website may be useful background when considering whether and what air toxics to monitor on a reservation, even if no 1999 assessment was possible for that reservation due to lack of an emissions inventory.

Monitoring for NAAQS Pollutants using Federal Reference Methods (FRM) or Federal Equivalent Methods (FEM): This type of monitoring is primarily useful for determining on a formal basis whether air quality in a given location meets or does not meet a national ambient air quality standard (NAAQS), for example ozone, PM_{2.5}, PM₁₀, CO, or lead. It takes three years of data collection to make this determination for most NAAQSs of interest. Establishing attainment status via FRM/FEM monitoring data can be important as it can affect the legal requirements that apply to sources at and around that location. It can also affect whether a tribe can pursue action to seek emission reductions from upwind sources beyond the tribal boundary.

Monitoring for certain NAAQS pollutants (e.g., PM_{2.5}, PM₁₀, CO, NO₂, lead) may indicate a need to reduce emissions within the tribal boundary in order to protect public health of the residents, but in many cases it will be obvious from an understanding of emission-generating activities that local sources do not cause or contribute to concentrations near or above the NAAQS. Judging from experiences in many non-tribal situations around the country, CO nonattainment is very unlikely on reservations, even where traffic is attracted by entertainment centers. Ozone nonattainment if it exists is most likely due to upwind off-reservation sources. PM₁₀ and PM_{2.5} sources on reservations (wood burning, fires, road and agricultural dust, etc.) could be a problem by themselves or on top of concentrations coming from upwind areas. Lead concentrations are very unlikely to approach the NAAQS unless there is uncontrolled smelting/recycling of car batteries.

Before beginning this type of monitoring, the Regional Office and tribe should consider: (1) whether attainment status can be determined with reasonable confidence in other ways (including passive monitors and other methods that do not qualify as Federal Reference methods but can be sufficient for unofficially showing that concentrations are well below the NAAQS), (2) how information on the attainment/nonattainment status once available could affect management of the tribal air program, and (3) how long the monitoring should continue if it does or does not show a NAAQS violation.

The EPA Regional Offices should work with the tribes to review the status and continued utility of any FRM monitors which have been operating long enough to have to have reasonably complete data for at least 3 to 5 years. If attainment with a comfortable margin has been found and if there is no on-reservation or nearby development that is likely to change the situation substantially, it may be good to discontinue this type of monitoring in favor of other environmental management efforts.

On October 17, 2006, EPA promulgated a rule which lowered the 24-hour PM_{2.5} NAAQS from 65 to 35 micrograms per cubic meter. This change should be considered when planning tribal monitoring, because the more stringent standard is more likely to be violated as a result of local sources such as seasonal wood burning, wild fires, and prescribed burning than is the annual PM_{2.5} NAAQS. EPA also revoked the annual PM₁₀ NAAQS everywhere. This change is expected to have no impact on tribes, as the annual standard was rarely violated anyway.

Continuous PM_{2.5} Monitoring – There are several types and brands of monitors that provide estimates of PM_{2.5} concentrations on a continuous basis, without need for filters to be sent to a laboratory for weighing. These are both less expensive to operate than a filter-based monitor and can give information on air quality that tribal officials and the public can use in real time to manage emission sources and personal activities. Where official status as attainment or nonattainment is not an important issue, this type of monitor may better serve tribal needs. For example, this type of monitoring may be useful in burn management programs. Improved continuous PM_{2.5} monitors with official status as Federal Equivalent Methods may become available in the next couple of years.

Passive Monitoring and Other Types of Screening Monitoring: A passive monitor is one which “soaks up” pollution rather than actively collecting it on a filter or pumping it through an on-site measurement device. This means they can be used where there is no electricity supply. Also, the monitoring unit is usually inexpensive, so it is possible to place them more closely together or over a much larger area than conventional powered monitors could possibly be placed. Passive monitors are not suitable for formal designation of an area as attainment or nonattainment but they can help a tribe understand the air quality situation on its reservation, for example, what part of a reservation has the worst air quality and whether any part has concentrations that approach health benchmarks. There are passive monitors available for a number of pollutants including several volatile organic air toxics including benzene, ozone, CO, and SO₂. Time periods for exposing the monitor to the ambient (or indoor) air vary. The monitors must be collected each sampling period and sent to a laboratory for chemical analysis, so costs are not insignificant. Passive monitoring programs are usually of short duration because of the field labor and laboratory costs, compared to automated continuous analysers. They have the advantage of requiring little up-front investment, however. EPA Region 6 has been in the forefront of applying passive monitoring to a variety of situations on and off reservations.

Photochemical Assessment Monitoring: This is a very specialized type of monitoring related to the ozone NAAQS, in which air samples collected in the morning are taken to a laboratory for measurement of the concentrations of many individual hydrocarbon species including some toxic gases. This monitoring is only done during the ozone season. The purpose is to help identify the chemicals and sources contributing to ozone and the most efficient controls for reducing ozone concentrations. It is unlikely that this type of monitoring meets any distinct tribal need. See <http://www.epa.gov/ttn/amtic/pamsmain.html> for further information.

PM_{2.5} Speciation Monitoring: This is a very specialized and expensive type of monitoring related to

the PM_{2.5} NAAQS, in which filters collected over a 24-hour period are shipped by overnight express to a laboratory for measurement of various components of PM_{2.5} such as sulfate, nitrate, elemental carbon, organic carbon, and individual metals. This type of monitoring is done every third or every sixth day, year round. The purpose is to help identify the direct and precursor pollutants and sources contributing to PM_{2.5} and the most efficient controls for reducing PM_{2.5} concentrations. Most STN sites are in urban areas. This type of monitoring may meet a tribal need, if a PM_{2.5} nonattainment (or near nonattainment) situation is confirmed through simpler monitoring and its causes are not apparent, if high numbers of diesel engines operate in or upwind of the reservation, or if sources of toxic metals in PM_{2.5} form are known or suspected to be a health risk. However, if metals are a concern, it may be more appropriate to sample for metals in PM₁₀ form in order to capture all the PM that enters the human thorax and may affect health. Most air toxics monitoring programs sampling for toxic metals do so in PM₁₀ form. See <http://www.epa.gov/ttn/amtic/speciepg.html> for more information.

IMPROVE Protocol Monitoring: IMPROVE stands for Interagency Monitoring of Protected Visual Environments. The IMPROVE program is described elsewhere in this Appendix. See <http://vista.cira.colostate.edu/improve/> for more information. Each site has several monitors, all aimed at collecting information to understand what pollutants and sources contribute to haze and to track changes in visibility over many years. Among these monitors are a PM₁₀ sampler and samplers to provide speciation details for PM_{2.5}. These data allow calculation of an index of visibility. The IMPROVE program can be convenient for the monitoring organization providing the site, because the IMPROVE program contractors provide equipment installation, training, periodic field support, laboratory analysis, and data management and publication.

Over the last several years, about 10 tribes have applied for and received grant assistance from their EPA Regional Office to allow them to request the IMPROVE program to establish and provide technical services for an IMPROVE protocol sampling station on tribal land. Some tribal sites have operated for a period and then been discontinued. The grant funds needed to pay for this are awarded to the tribe by the EPA Regional Office, but transferred to the IMPROVE program through OAQPS. Tribal monitoring organizations may ask for FY 2007 funding from their EPA Regional Office to continue, discontinue, or add sites for the monitoring period which runs from July 1, 2007 through June 30, 2008. FY 2008 funding would be used for the July 1, 2008 through June 30, 2009 period. Once a tribal monitoring organization has been awarded funds for such sites, the tribe and/or the Regional Office may contact Marc Pitchford at 702-895-0432 to request monitoring support services and to begin arranging for the necessary funds transfer. Requests should be made as early in calendar year 2007 as possible, but no later than March 31 in order to start or continue monitoring on July 1.. In some cases in the past, a Regional Planning Organization or other multi-state organization has funded a tribe's operation of an IMPROVE protocol site because of its advantageous location.

IMPROVE protocol monitoring is the generally accepted approach to quantifying visibility, and is the right approach if a tribe has a need for such quantification. EPA Regional Office staff can assist a tribe in understanding how such data could be used for official and unofficial purposes. Because the protocol quantifies carbonaceous material in PM_{2.5}, IMPROVE protocol sampling may also be of interest if high numbers of diesel engines operate in or upwind of the reservation. IMPROVE monitors are not Federal Reference/Equivalent monitors, however, and cannot be used for designation purposes or to officially trigger a requirement for off-reservation sources to reduce their adverse impact on attainment within a reservation or other tribal land area.

CASTNET Monitoring: CASTNET is a long-term monitoring network of more than 80 sites located primarily in rural areas. This network is designed to measure status and trends in deposition of particles,

ozone, and other pollution emitted from facilities with tall stacks (generally power plants), mixed in the atmosphere, and transported over long distances. Ambient monitoring at CASTNET sites is supposed to reflect the overall effect of emissions from many sources, rather than any individual plant. While there is likely to be no direct use of such monitoring data in a tribe's own air quality program, a tribe may wish to host a CASTNET site in order to help advance the national air quality program. Tribes presently operate three sites. CASTNET is seeking to expand the number of sites in the western U.S. CASTNET sites are supposed to remain in operation for a long time. See <http://www.epa.gov/castnet/> for further information.

National Acid Deposition Program: The NADP program is run by the U.S. Geological Survey, and collects data on the chemistry of precipitation. While there is likely to be no direct use of such monitoring data in a tribe's own air quality control program, a tribe may wish to host a NADP site in order to understand its air and water quality and to help advance the national air quality and water quality programs. A number of tribes currently are partners in this program and have sampling sites on their lands. See <http://nadp.sws.uiuc.edu/> for more information.

Smoke Monitoring: Tribes who use controlled or prescribed burning to manage forest or range land, or whose populations are frequently affected by fires may be interested in monitoring smoke concentrations either to help make decision on when it is safe to burn, or to advise residents of when to take action to avoid smoke exposure. There are no formal procedures or standard techniques for such monitoring at this time, but portable monitors and satellite data communication devices have been tested and found to be practical by EPA and several governmental partners.

NCore Multi-pollutant Monitoring: The NCore multi-pollutant precursor gas monitoring network is a concept that will be turned into reality over the next few years. The plan is to have a network of about 75 sites which simultaneously measure a variety of gas and particle pollutants, using continuous methods to follow changes during a single day, across the seasons, and over many years. Most of these sites will be in urban areas and will be operated by state or local governments. However, about 20 sites need to be in rural areas. While there is likely to be a direct use for only some of the monitoring data collected at an NCore station in a tribe's own air quality program, a tribe may wish to host a rural site in order to understand its air quality and to help advance the national air quality program. EPA OAQPS and Regional Offices will be planning the location of sites over the next couple of years, and Regional Office staff will contact a tribe if there appears to be an advantage in placing a site on a reservation. EPA has not yet identified exactly how a rural site on tribal land would be funded, given that the benefit of the data from such a tribal site would accrue to many other parties. EPA will be exploring this question with tribal and state/local officials over the next year or two. These sites are supposed to operate for many years without being moved, once initiated.

Program Support for Monitoring (National Monitoring Procurement Contract)

EPA makes procurement services available to state and local agencies, via national contracts, for the use of ambient monitoring equipment, sample analysis, and associated data reporting/archiving (see Table A-7). This bulk purchase approach provides significant cost-savings to state and local agencies. The services offered in past years included assistance in monitoring site set-up and laboratory sample analysis for nonmethane organic compounds, urban air toxics, carbonyls, PAMS, and hazardous air pollutants; performance evaluation (PE) sample support for agencies participating in NATTS; filters for PM₁₀ and Pb in the form of total

suspended particulates; PM2.5 filters; laboratory services for PM2.5 speciation; IMPROVE monitoring services; and independent audits under the NPAP and PEP programs.

Traditionally, OAQPS works with Regions to determine the level of funds that each state or Tribe wants to allocate for the national procurement contracts. These services can be conducted as either associated program support or as in-kind assistance. In providing associated program support, EPA works with Regions, tribes, and state and local agencies in advance to identify needs on a national basis and targets funds for the support *before* determining the final Region-by-Region allocation of grant funds (i.e., pre-allotment). In contrast, in-kind assistance is agency-specific and the value of the service is included in the grant agreement of a state, tribe, or local agency *after* final agency-by-agency allotments are determined. This approach requires the recipient provide an appropriate amount of matching funds and meet other grant administrative obligations relative to the in-kind assistance. This occurs when contract support is requested by a grant recipient after its grant is awarded.

Table A-7. Preliminary FY 2008 National Procurement Contract Amounts

Region	1	2	3	4	5	6	7	8	9	10	Totals
Categories											
S/NMOC Sampling Sites	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
UATMP Sites	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
PAMS Q/A Support	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Carbonyl Monitoring	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
HAP Support	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
PM10 and Pb Filters	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
PM2.5 filters	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
PM2.5 speciation	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
IMPROVE monitoring	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
NPAP audits for NAAQS gases and Pb	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
PEP audits for PM2.5	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Totals	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

(As of the date of this draft, the Office of Air Quality Planning and Standards is working with the EPA Regional Offices to obtain updated contractual needs for FY 2008. These amounts will be included in the final FY 2008 guidance to be published in April 2007, and used to make the initial holdback of FY 2008 STAG funds at the start of the fiscal year. The current level shown in the straw allocation in Section V is a placeholder amount based on FY 2007 information. The FY 2008 holdback will be subsequently adjusted based on more definite indication of needs. Residual funds are always returned to Regional Offices for use in direct awards to recipients.)

Typically amounts to be set aside on a pre-allotment basis for the forthcoming fiscal year are identified after EPA and states conclude their grant negotiations in the preceding spring and summer. Since the national grant guidance is released prior to these final agreements, OAR includes funding amounts from the prior year as preliminary or placeholder amounts. Once agreements are completed, the procurement table and the final regional allotments are updated. The current table (Table A-7) does not yet show FY 2008 placeholder amounts by function and appropriate pollutant category (i.e., ozone, PM, toxics sub-objectives, etc.) on a regional basis. These amounts will be entered to show the initial FY2008 holdback. Final FY 20078 amounts will be based upon confirmed needs received from the Regions and their state and local agencies early in FY 2008. For FY 2008, the national procurement services noted above will continue to be handled as associated program support on a pre-allotment basis. For more information on the national procurement contract, including state-specific information, contact Margaret Dougherty at 919-541-2344 or via email at dougherty.margaret@epa.gov (contractual issues) or Phil Lorang at 919-541-5463 or via email at lorang.phil@epa.gov (technical issues).

Centralized Site Support and Laboratory Analytical Services - The EPA will continue coordinating centralized laboratory analytical services to support air toxics, organic compound, and PAMS programs in FY 2008 with those regional, state, and local agencies wishing to participate. Examples of services available via this national contract include those listed below.

Speciated and Total Nonmethane Organic Compound Program (SNMOC/NMOC): The SNMOC/NMOC program has been operating since 1984. The EPA continues to support a centralized program for assistance to state and local agencies in the collection of NMOC, SNMOC, selected toxic compounds, and carbonyl compounds. This program was initiated in 1984 to provide data for use in development of control strategies for ozone. As part of the SNMOC /NMOC program, participating sites are provided with all necessary sampling equipment, which they may co-locate with NO_x monitors. The SNMOC/NMOC program consists of the following base components:

- Base Site support for sampling equipment preparation, installation and training, problem solving, and final reporting; and
- Canister sample analysis for 78 speciated NMOC or total NMOC.

Options include:

- Analysis for 60 toxic and polar compounds;
- Cartridge sample analysis for 15 carbonyl compounds; and
- Concurrent analysis for both toxic and polar compounds and speciated NMOC at a cost that is significantly reduced compared to performing the two analyses separately.

States collect the samples in canisters and/or cartridges and air freight them to Research Triangle Park, NC, for analysis. The samples are collected each week day from 6:00 to 9:00a.m. during the summer (typically June 1-September 30). In general, 96 samples are collected at each site over the study period. However, additional samples may be purchased.

Urban Air Toxics Monitoring: To support emerging needs for information on levels of organic toxic species in ambient air, OAQPS initiated the Urban Air Toxics Monitoring Program (UATMP) in 1988. This program serves as an analytical/technical support program similar to the SNMOC/NMOC program. The major purpose of this program is to support state and local agency efforts to assess the nature and magnitude of various air toxics problems via collection of 24-hour integrated ambient air samples at six or twelve day sampling intervals, sample analysis in a central laboratory, data reporting to EPA's Air Quality System, and site-specific data analyses. This program continues to be highly successful, with excellent overall data capture and data quality that meets well-designed program goals. The UATMP consists of the following base components:

- Base site support for sampling equipment preparation, installation and training, problem solving, and final reporting;
- Canister sample analysis for 60 toxic and polar compounds; and
- Cartridge sample analysis for 15 carbonyl compounds.

Options include:

- Canister sample analysis for 78 speciated NMOC; and
- Concurrent analysis for both toxic and polar compounds and speciated NMOC at a cost that is significantly reduced compared to performing the two analyses separately.

Carbonyl Monitoring: Carbonyl sampling and analysis has been part of the monitoring support options that the Agency has provided since 1990. While carbonyl monitoring support can still be performed simultaneously with other program elements, the independent carbonyl option provides more flexibility for special studies and saturation monitoring programs. The Carbonyl Monitoring Program support consists of the following base components:

- Base site support for sampling equipment preparation, installation and training, problem solving, and final reporting; and
- Cartridge sample analysis for 15 carbonyl compounds.

PAMS and Toxics: PAMS support items will be available to include technical off-site and on-site support (initial equipment set-up, on-site technical assistance, consultation, problem solving, etc.); quality control (QC); and quality assurance (QA) program support (data validation, standards acquisition, and data management support). VOC canister, carbonyl compounds sample and concurrent toxics and speciated hydrocarbon analysis are also available.

The PAMS and toxics technical support program consists of the following base components:

- Technical site support;
- QA/QC support;
- Canister analysis support for PAMS compounds;

- Cartridge sample analysis for 15 carbonyl compounds; and
- Concurrent analysis for both toxic and polar compounds and speciated NMOC at a cost that is significantly reduced compared to performing the two analyses separately.

The PAMS automated analysis systems and/or multiple canister collection system purchase and installation are the responsibility of the participant. The amount of support an agency can order for the PAMS technical site support and QA/QC components of the program have been divided into smaller increments so that state, and local agencies can order the exact amount of support they require.

Other Hazardous Air Pollutant Analysis: The national monitoring support programs have been expanded to provide for the measurement of additional HAPs to support the effective implementation of the CAA and address the needs of other special studies. Analytical services support is provided for samples containing specific HAPs, which are a subset of the 188 compounds listed in the CAA. Participants are responsible for providing all necessary sampling equipment. The analysis among categories is based upon the specific needs of the state or local agency. This support also will assist the states in implementing the new national ambient monitoring network. Some of the available options under this category include:

- Canister sample analysis for 60 toxic and polar compounds;
- Cartridge sample analysis for 15 carbonyl compounds;
- Metals, hexavalent chromium, semivolatiles, PAHs, dioxin, etc.

Air Toxics Performance Evaluation Sample Support: Agencies that are participating in the NATTS can receive PE samples on an annual basis. These can include VOCs, Carbonyls, SVOCs and metals on quartz filters. The PE samples shall be generated and analyzed by the national contractor and sent as “blind” samples to the participating agency. If an agency uses the national contractor for analysis, the agency will not be able to use the contractor for PE sample support.

For more information on Centralized Site Support and Laboratory Analytical Services, contact Margaret Dougherty at 919-541-2344 (dougherty.margaret@epa.gov) or Michael Jones at 919-541-0528 (jones.mike@epa.gov).

Particulate Matter Filters - OAQPS has historically purchased particulate matter filters (for PM₁₀ monitoring, total suspended particulate sampling used for Pb and other metals monitoring, and PM_{2.5} monitoring) through national contracts and distributed these to state and local agencies across the nation. The economies of scale from this type of centralized purchasing, centralized acceptance testing, and distribution of filters has produced lower costs than if state and local agencies each purchased these filters through their individual agencies. State and local agencies are responsible for providing information to the Regions each year on the numbers and types of filters required prior to shipment.

For information on filter purchases, contact David Lutz at 919-541-5476 (lutz.david@epa.gov).

As of 2/27/07

SECTION V. Straw FY 2008 State/Local Air Grant Allocation

	1	2	3	4	5	6	7	8	9	10	Total
Ozone	6,713,665	5,306,405	4,187,706	5,227,082	9,717,976	7,983,785	1,105,746	1,155,193	11,236,933	1,156,861	53,791,352
PM	1,548,992	2,484,071	4,014,442	4,021,900	4,589,624	981,453	1,680,885	2,229,245	6,399,128	2,601,897	30,551,637
PM-U.S.-Mexico Border	0	0	0	0	0	1,341,705	0	0	1,341,705	0	2,683,411
PM/Visibility-WRAP	0	0	0	0	0	0	0	0	147,835	0	147,835
Visibility	33,867	377,866	664,087	1,748,652	519,283	658,685	450,135	1,310,100	57,812	532,594	6,353,081
NO2	47,072	574,782	825,978	0	167,849	512,310	56,859	227,157	180,977	61,372	2,654,356
Lead (w/ \$80K added to R7)	0	0	203,191	174,865	199,321	73,187	151,624	43,235	20,109	0	865,532
CO	1,161,241	211,552	771,464	524,596	896,944	146,374	23,691	469,413	754,069	337,897	5,297,240
SO2	404,379	541,520	1,458,678	699,461	1,612,925	219,562	42,644	533,922	462,496	64,899	6,040,485
Air Toxics Implementation	1,957,591	1,430,304	1,139,850	1,573,787	3,430,416	1,024,620	549,639	283,432	3,011,249	1,495,496	15,896,383
Air Toxics Characterization	857,626	1,318,442	2,413,508	2,098,383	1,838,728	1,463,744	431,182	350,687	1,012,966	722,353	12,507,618
Air Toxics - Great Lakes	0	0	0	0	1,169,970	0	0	0	0	0	1,169,970
Acid Rain	0	286,061	214,754	349,730	1,001,849	0	0	185,981	153,327	0	2,191,703
Sub-total	12,724,431	12,531,003	15,893,657	16,418,457	25,144,883	14,405,425	4,492,405	6,788,365	24,778,606	6,973,368	140,150,603
Nat'l Procure. Support											526,250
NOx/CAIR Trading System											2,327,551
IMPROVE											1,228,883
NE OTC											639,018
NACAA											1,508,406
CAA Training											2,049,647
NPAP Reserve											396,266
PM2.5 Monitoring - ROs/OAR **											25,500,000
Air Toxics Monitoring - NATTS											5,434,000
Local Scale Air Toxics Monitoring											4,418,876
Regional Haze Planning											1,000,000
Sub-total											45,028,897
Total											185,179,500

* Straw FY 2008 allocation as of 2/27/07. Redistributes \$1.5M increase in continuing programs on a pro-rata basis across all categories and all regions.

** A straw allocation for PM2.5 air monitoring grants is still being developed.

Section VI. STATE INDOOR RADON PROGRAM

The State Indoor Radon Grant (SIRG) Program distributes grants authorized under section 306 and 10(a) of TSCA. The SIRG program's objectives are outlined in EPA's *State and Tribal Indoor Radon Grants Program Guidance and Handbook* (January 2005) (see also <http://www.epa.gov/radon/sirgprogram.html>). State and Tribal recipients are encouraged to design and implement programs that: (a) focus on the most direct and effective approaches that reduce the radon risk in homes (and schools); (b) establish measurable risk reduction targets; and (c) achieve quantifiable public health results. Recipients of FY 2008 SIRG grants should give priority to achieving these goals:

- Mitigating existing homes
- Building homes to include radon resistant features (RRNC)
- Mitigating or building schools to include radon resistant features (RRNC)
- Other projects and activities that clearly contribute to achieving the three preceding goals, especially for homes.

The SIRG program's priorities, performance measures, reporting of results and grant allocation methodology are integrated to maximize the reduction of risks from radon. Population, smoking rates and geologic potential (e.g., high-radon areas) are the principal factors in allocating appropriated SIRG funds. The Regional SIRG allocation includes funds for tribes that have existing agreements or for potential new tribal recipients. The regional offices have some discretion in determining the state or Tribal award amounts. EPA and SIRG recipients are expected to continue implementation of the SIRG measures template, checklist and guidance (June 2006) by including the template in work plans and in approving projects that reflect EPA's radon priorities and results measures.

A proposed allocation for FY 2008 is shown in Table A-8. It is important to note that the SIRG recipient cost sharing (minimum match) requirement was permanently reduced from 50% to 40% as part of the FY 2006 appropriation. The 40% match is expected to facilitate individual States participating in the SIRG program. The SIRG program contact is Phil Jalbert (202-343-9431, jalbert.philip@epa.gov).

Table A-8. FY 2008 Preliminary State Indoor Radon Grant Allocation (PRC - 102A05E)		
REGION	PERCENT	FY2008
1	10.5	847,718
2	9.0	726,615
3	8.3	670,101
4	17.3	1,396,713
5	22.1	1,784,244
6	10.2	823,497
7	8.7	702,395
8	6.6	532,851
9	5.2	419,822
10	2.1	169,544
TOTAL	100.0	\$8,073,500